











## **THE ECONOMIC POSITION OF PERSIA**



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OF  
PERSIA

BY  
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## PREFACE

THIS book is an attempt to present a view of the economic conditions existing in Persia at the present time, and also to suggest remedies which these conditions indicate as being necessary, possible and practical. There is so very little known in Europe and America about present-day Persia and the opportunities which exist in that country that a book of this sort may not be out of place at this juncture. It is hoped that by a presentation of the actual conditions and an explanation of the future possibilities of Persia a co-operation of interests between the outside world and Persia may be brought about, which would greatly help towards the economic development of that country.

So far as I know, this is the first attempt of any one to treat this subject in the English language; if there are others who have referred to the economic conditions of Persia they have done so in books and other writings written on Persia in general. Besides, this is an attempt by a Persian who is more entitled to know about his own country than Europeans who have based their information merely on a short visit to the country.

These pages were first written in 1919 in the form of a thesis required in connection with my degree at the Columbia University, New York, and they are now being submitted to the public in a much revised form.

I have to acknowledge my great indebtedness to Professor Edwin R. A. Seligman of Columbia University for the privilege of working out this subject while studying under him.



## CONTENTS

CHAPTER	-	PAGE
I INTRODUCTORY .. .. .	.. .. .	I
II AGRICULTURE AND IRRIGATION .. .. .	.. .. .	9
III AGRICULTURAL PRODUCTS .. .. .	.. .. .	16
IV MINERAL RESOURCES .. .. .	.. .. .	30
V THE OIL INDUSTRY .. .. .	.. .. .	37
VI MANUFACTURED ARTICLES—MODERN INDUSTRY		45
VII COMMUNICATIONS .. .. .	.. .. .	53
VIII FINANCE AND BANKING .. .. .	.. .. .	66
IX COMMERCE AND TRADE .. .. .	.. .. .	75
X THE FUTURE ECONOMIC DEVELOPMENT OF PERSIA		83



## CHAPTER I

### INTRODUCTORY

#### A BRIEF DESCRIPTION OF PERSIA

##### AREA

PERSIA is bounded on the north by the Caucasus, the Caspian Sea and Turkistan ; on the south by the Indian Ocean and the Persian Gulf ; on the east by Afghanistan and British Baluchistan ; and on the west by Turkey and Iraq. A line extending north-west and south-east, nearly bisecting the country, is 1,400 miles long. The country's greatest extent from south to north, namely, from Ras el Kuh on the Straits of Hormuz to its northernmost point on the frontier of Turkistan, is 875 miles in length. The area of Persia is over one-fifth that of the United States of America excluding Alaska, or as large as France, Germany and England put together, being 628,000 square miles, or 1,645,000 square kilometres.

##### CLIMATE

In winter the cold is intense on the high table-land. The summers are very warm, but there is little humidity, and the dry heat is very easy to bear. On the other hand, the air is damp and relaxing in the forest-covered lowlands of the Caspian, and the southern maritime tracts are very dry and hot at most seasons. Spring and autumn are the most enjoyable parts of the year. The average annual rainfall perhaps does not exceed 13 inches in any part of the country except in the comparatively narrow strip bordering on the Caspian Sea, where the rainfall is about five times as much as that of the highlands.

## GEOLOGY

The central region of Persia is covered by Quaternary deposits and is surrounded on the north, west and south by a raised rim composed of older rocks.

Most of the table-land and mountains are of sedimentary formation, largely sandstone, tertiary limestone, chalks and cretaceous rocks ; but, interspersed among the sedimentary rocks, are mountains, built up of eruptive rocks and volcanic ash, such as Mounts Damavand, Savalan, and many others. The deserts are composed mainly of saline and sand accumulation.

## POPULATION

On considering the material and industrial resources of a country—those possessions or advantages which, in fact, are capable of being utilized as means of wealth—first among a nation's resources must be counted its people. There can be, I think, no doubt to those who have some historical knowledge, that the population of Persia was once much larger than it is at present. Fifty millions were ascribed by some writers to the time of Darius, and forty millions mentioned by Chardin in the Safavean days (15th-18th centuries). Malcolm, writing in the early part of the nineteenth century, estimated the population as about 6,000,000, balancing against the checks upon its growth, which were identical with those named by Chardin, the following advantages, viz.: "The salubrity of the climate, the cheapness of provisions, the rare occurrence of famine, the bloodless character of civil wars, the obligation to marry, and the comparatively small number of prostitutes." Rawlinson in 1850 estimated the population as ten millions ; but in 1873, after two desolating visitations of cholera and famine, he reduced his estimate to six millions.

Earl Curzon, writing in 1892, estimated the population of Persia to be about 9,000,000. Mr. Shuster, who was for a time the Financial Adviser to the Persian Government, puts the total at 12,000,000. A Persian statistician, who took the estimated census of three large cities as the basis and compared them with the estimates of other writers, finds

in his calculations that the population of Persia in 1914 was approximately 15,000,000.

When we remember that Persia is three times as large as France, while the above estimates leave her only about one-fourth the population, we can form some idea of how thinly inhabited she is.

Since Persia had in the past a population three times as great as she has at present, the question naturally arises as to what have been the causes of the decline of the population. Early marriage and premature ageing, the great length of the nursing period and the consequent impaired fertility of the female sex, can be mentioned in the first place. Secondly, the lack of public sanitation and the consequent ravages of typhus, cholera, malaria and plague, can be mentioned. The most important reason, however, is war: the exterminating wars of the Tartars, Mongols and Afghans, the raids of Turkomans in the eastern provinces, and lastly, civil wars. These wars have made Persia, in the last four or five centuries, a continuous battle-ground. Earlier in history the Arabs ravaged the country many times, while still earlier, Greeks fought all over Persia.

In the last twenty years inadequate means of sanitation and medical help have also contributed to the decrease of the population. The revolution of 1906, the subsequent civil wars, and, above all, the violation of Persian neutrality during the Great War, followed by the invasion of the greater part of the country, coupled with famines, have contributed to the diminution of the human resources of Persia.

To add another estimate to the many already made by different writers, I am inclined to believe that the present population of Persia is about 10,000,000.

Unfortunately, no census has ever been taken in Persia, and the machinery for doing so has never been in existence. The idea is repugnant to the illiterate masses, who fear that this would become the basis for further taxations; this is the reason why no exact figures have ever been collected. Beginning with the change of régime in 1906 and the introduction of a modern system of administration, the Government have again and again realized the necessity of building

up machinery for taking the census ; but unfortunately this enterprise has not as yet materialized. There is no doubt that a careful survey of the country will add to the efficiency of the administration, and it is hoped that such a census will be started very soon.

There is at present a bill before the Majlis (Parliament) which provides for a compulsory registration of births, marriages, deaths, etc., and it is hoped that when this Act is passed and enforced the preliminary machinery for a general census of the country will be established.

In 1922, the first census of the city of Tehran proper was attempted which showed that the population was 210,000. Formerly, it was estimated that Tehran contained between 300,000 to 400,000 souls and this is a good example of how little reliance can be placed on mere estimates which are not substantiated by accurate figures.

In order to develop the material life of the country Persia needs men. The vast natural resources cannot be developed without man-power. The best way for Persia to get men is to encourage immigration and to improve sanitation. The thickly populated countries of Europe can find a healthy and promising country for their surplus population in Persia, if equal opportunities, as well as proper encouragements, are afforded them.

Some people who are prejudiced by racial and religious questions claim that this suggested immigration is not practicable, and that it would be bound to create social difficulties in Persia. I am aware of this theory, but when the question is studied from a scientific point of view and the racial, political and religious problems are taken into consideration and provided for, I believe that immigration, especially of the European races within certain limits, would prove very useful as a means of remedying the shortage of population. Such a plan would bring about the dissemination of knowledge, the propagation of modern methods of living, and the introduction of European civilization into the life of the people—a thing which is more practical for present-day Persia than education.

Assuming that the question of immigration may be

delayed, the most important thing for the increase of the population in Persia is immediate sanitary measures and free medical help for the poorer classes. These are of prime importance to the life of the country, and they ought to be started as soon as possible.

#### TOPOGRAPHY

Persia is an elevated table-land, the western half of the great Iranian plateau, from 3,000 to 5,000 feet in general altitude, sinking to the Caspian Sea and the plain of Turkistan along its northern frontier and to the Persian Gulf and the Mesopotamian plain on its south and western borders. To reach the plateau, great mountain barriers must be crossed on all sides excepting in the east, where the table-land and the mountains merge imperceptibly into those of Afghanistan and British Baluchistan. On the other three sides great mountain ranges stretch between the interior plateau and the narrow plains which slope to the Caspian Sea on the north and the Persian Gulf on the south and merge with the plains of Mesopotamia on the west.

The plain of the Caspian presents a wonderful contrast to the colourless, waterless and treeless expanse of the plateau to the south, from which it is separated by the Alburz mountains. It comprises the maritime provinces of Astarabad, Mazanderan and Gilan, with an annual rainfall of 56 inches, so that the mountain slopes are heavily forested, and in the deep alluvial soils brought down by the torrential streams, there are dense jungles down to the Caspian, where the salt and sand choke the vegetation. Furthermore, it possesses a degree of atmospheric humidity that is seldom found outside the tropics. For purposes of agriculture and fruit-raising this is the most favoured part of Persia. Many plantations have been cleared in the forests and all the cultivated crops of southern Europe, including the mulberry used in the silk industry, attain high perfection. This luxuriance of vegetable life is due to the vapour-charged clouds of the Caspian, which are brought south by the prevailing winds, and impinging on the northern slopes of the Alburz, descend in mist and rain to the lowlands.

Along the southern maritime border the mountains, low in elevation and extending east and west, often closely approach the sea ; and the narrow plains between them and the sea are dry and barren, except in certain districts where the rainfall supplemented by irrigation suffices for agriculture. Nearly all the mountains of Persia are bleakly sterile in aspect. The most imposing of the mountain ranges is the Alburz, which continues eastward and stretches like a mighty mountain wall along the northern border. Its upland valleys, with an average elevation of about 4,000 feet, are dominated by peaks rising from 8,000 to 11,000 feet above the sea ; and towering above them all is Damavand, an extinct volcano 19,000 feet high, the culminating point of Persia. The wide mountain lands of western Persia extend in many parallel ranges throughout the whole of that part of the country overlooking the valley of the Tigris and the Persian Gulf. Their trend is from north-west to south-east.

The table-land of the interior, thus walled in by mountains, is itself intersected by numerous ranges and detached masses of mountains, excepting in eastern Persia, where great plains and deserts are the main topographical feature. Between these ranges are wide plains and narrow valleys. These plains and valleys would be utterly sterile were it not for the mountains near them, which receive most of the precipitation in the winter in the form of snow, which is easily stored up against the summer. The general aspect of the plateau is that of a waste stretching to the base of these mountains in the two deserts of the east the Dasht-i-Kavir in the north-east and the Dasht-i-Lut to the south. Their combined length is over 500 miles, but they are separated by some hills.

All these topographical aspects have a marked effect upon the distribution of the population. The lines of cities and villages follow the trend of the mountains, from east to west across north Persia and from north-west to south-east across west and central Persia ; because only in the neighbourhood of the mountains can water be obtained to supply the towns and nourish the gardens and fields.

## HYDROGRAPHY

The drainage area of Persia may be distributed as follows :—into the Arabian Sea and Persian Gulf, 125,000 square miles ; into the Caspian, 110,000 square miles ; into the Sistan depression, 30,000 ; into the Urumiah Lake, 23,000 into the interior of the country, 340,000. The first district comprises the south-western provinces and the coast region as far east as British Baluchistan ; the second relates to the tracts bordering the Caspian Sea ; the third Sistan with part of Helmand basin and a considerable tract on the west ; the fourth is a comparatively small area on the north-western frontier ; and the fifth comprises the provinces of Kirman, a part of Fars, Yazd, Isfahan, Kashan, Qum, Tehran, Qazvin, Khamseh, Samnan, Damghan, Shahrud and Khorasan.

The four rivers in reference to the Caspian watershed, are the Aras or Araxes which forms part of the frontier between Caucasia and Persia on the west, the Safid Rud on the South-west, and the Gargan and Atrak at the south-eastern corner of that inland sea. The Aras rises south of Erzerum, in Turkey, and flows east through Turkey, Armenia and forming the Russo-Persian frontier empties itself into the Caspian after a course of 600 miles. The Safid Rud rises in the mountains of Kurdistan, and has a very tortuous course of nearly 500 miles. It drains about 30,000 square miles of the country. The Gargan rises on the Armultu plateau in Khorasan and enters the Caspian after a course of about 200 miles. The Atrak rises a few miles from Quchan and enters the Caspian after a course of about 300 miles. It forms a part of the Russo-Persian frontier in the Trans-Caspian region. During heavy rains and when the snows on the hills melt, thousands of streams flow from all directions into the innumerable depressions of inner Persia, or help to swell the rivers which have no outlet to the sea. It has often been alleged that Persia is a dry country without any considerable amount of drainage. This is far from being true. If all these streams of water were collected in dams and stored for irrigation purposes, a large part of the cultivable land of Persia which is now idle would be brought under cultivation.

The rivers flowing into the Persian Gulf and the Arabian Sea diminish in importance from west to east. There are first the Diyala and Kerkheh, flowing into the Tigris and Shatt-al-Arab respectively from the hills of Kurdistan ; the Abi Diz and Karun, which unite below Shushtar, and reach the Shatt-al-Arab at Mohammerah ; and the Jarshi and Tab, which with the Karun form " the delta of Persian Khuzistan, the most extensive and fertile plain in Persia." The Minab has two outlets into the Persian Gulf, one the Khori-Minab about 30 miles east of Bandar Abbas, the other the true Minab at Khagun.

The Helmand, with its upper part in Afghanistan forms, just east of the Great Sand Desert, the lake of Sistan, surrounded by great swampy tracts covered with grass or great reeds. Only two other lakes are of importance. Lake Urumiah lies in the north-west, from whose surface the snowy top of Mount Ararat can be seen and into which fourteen rivers flow. It is heavily charged with salt. Its wooded shores and islets give a pleasing impression. Its average depth is only about fifteen feet and though it covers an area of about 1,600 square miles, its volume is six or seven times less than that of Lake Geneva in Switzerland. The great salt lake of South Persia is Nairiz, much smaller than Urumiah, and with a greatly indented and fantastic outline. The principal river flowing into this lake is the Band Amir.

## CHAPTER II

### AGRICULTURE AND IRRIGATION

AGRICULTURE is, broadly speaking, the only industry by which most of the people of Persia live, and it is dependent to a very large extent on irrigation. To understand the position of agriculture in Persia, one has first to investigate the water supply of the country.

People who have travelled in Persia have often been struck by the large uncultivated tracts of land which separate the villages and farms. The moment that the boundaries of irrigated fields and gardens are passed, the country, except in the spring when the torrents are numerous, presents an aspect of brown desolation, and it is easy to understand the store which both ancient and modern Persians set by gardens.

The reason for this is a physical one—the shortage of the water-supply. From a glance at the map of Persia it will be seen that along the Caspian Sea the Alburz range, extends from one end of the country to the other; while in the south another range separates the hinterland from the Gulf. The reason that the climate of Persia is so dry is to be found in these two mountain ranges, which prevent the moisture of the sea from reaching the interior of the country. According to estimates made, the rainfall, except for the northern and the southern coasts, does not exceed a yearly average of 13 to 14 inches and in some parts it is even less.

With the exception of the Caspian provinces where the rainfall is sufficient to provide for cultivation without resorting to irrigation, the greater part of the country depends on irrigation. For the most part the rivers are either mountain streams, or, flowing inland, ultimately lose themselves in the desert or marshes. Moreover, they are for the

greater part seasonal in character, the torrents of spring shrinking later to mere trickles of water lost in stony beds.

Cultivation is restricted to the vicinity of rivers, and to districts artificially irrigated. The system of artificial irrigation which is in general use in the plains is a very expensive one. A well is sunk at the foot of the mountains until water is struck, and a lateral channel is then driven, additional wells being sunk every twenty or thirty yards. In this manner water is conveyed for very considerable distances. The labour and expenses of constructing and maintaining these canals, or "Qanats" as they are called, is enormous and can only be justified by the general scarcity of water. A great number of springs also exist all over Persia which are utilized for irrigation purposes being conveyed by means of Qanats.

This scarcity is not indeed beyond remedy, or at least considerable amelioration, for it must be admitted that at the present time no attempt is made to conserve the large bodies of water which run to waste in the spring, often inflicting great damage to the roads. Judging by the remains of ancient works, a very different state of affairs, must have existed in former times and, if such a conservation were to be undertaken on modern lines, there is every probability that the cultivated area could be greatly increased and a very much larger population maintained upon the land.

Considering the general fertility of the soil and the variety of the agricultural products ; and, given the necessary technical guidance and machinery, there is no reason why important public works should not be undertaken with the most beneficial results both to the country and to their promoters. The great public works already undertaken in India and Egypt have shown what gratifying results can be obtained, and it only remains for the Persians to initiate such undertakings and encourage their promotion by the same methods as those which have been adopted in other countries.

As has been said before, there are abundant flood waters which could be conserved by means of engineering works, and guided into channels to irrigate the non-cultivated lands now left barren. The advantages of such an undertaking

would result not only in increasing the cultivated area of the country, but would also provide for the security of life, increase the yield and the value of the land and the revenue derived from it, and would lessen the dangers of famine. The question of finance, however, imposes certain limitations and it is at the same time difficult to interest foreign investors in such schemes which have only a local value to the country. Most of the great public works in other countries are undertaken by the Government and if Persia could arrange to offer sound securities to foreign lenders she might be able to borrow a considerable sum for the purpose. Provided modern transport is established to stimulate the export of additional production, and provided the money is spent under the proper direction of experts both for the construction of the public works as well as for the improvement of agricultural methods of production, there is every likelihood that the revenues thus derived would generously compensate the interest as well as the sinking fund on such loans and would enable the Government to withdraw its securities for further developments.

As an example, I would mention the Shushtar dam and bridge on the Karun river whose construction has been under consideration for the last decade. According to some authorities this combined dam and bridge was constructed across the river Shatait in the year 260 A.D. It is one of the best examples of the many fine samples of ancient buildings, but it is now in need of repair and part of it of reconstruction. In the past it was used for irrigating an extensive area called Mian-Ab which for the most part is now barren. According to a report submitted by an official of the Persian Government who had caused a careful survey of the scheme to be made, the dam and the bridge could be reconstructed and in addition the flow of water from the dam could be harnessed for electricity at a total cost of £100,000. It was also estimated that the profits during the first fifteen years would cover the total expenditure involved.

I am of the opinion that the first step for the development of Agriculture lies in the direction of the improvement of irrigation and the conservation of water. Water storage

reservoirs, dams, weirs, a system of modern canal irrigation, diversion of the course of some rivers which run to waste and a just division of the present and future water supply of the country among the peasants could transform many of the present arid tracts of Persia into flourishing cultivable land.

In agriculture. Persia has made but little advance from the immemorial methods of the East, and the oxen and donkeys, manual labour and simple and rude implements are still the usual means employed in cultivation. The recent ravages of cattle plague and anthrax have been responsible for a start being made in the direction of using modern machinery. During recent years an agricultural school has been opened in Tehran under the direction of the Ministry of Finance and has made considerable progress in the way of disseminating modern scientific knowledge. Two exhibitions of agricultural machines have been held at this school where modern implements were exhibited in practice and these made a good impression on the minds of the people. To the Agricultural School is attached a Model Farm representing the modern methods of cultivation and it is hoped that similar farms will be started all over the country to encourage farming on modern lines.

The Government has adopted a plan of importing a number of simple machines for use on the State Domains, and there are already in Tehran a number of persons representing European and American firms which manufacture agricultural machines and import them into Persia.

The improvement of agricultural methods is vital to the life of the country and can only be realized by educating the farmers and peasants and encouraging the adoption of modern methods. Apart from the cost of an agricultural school in Tehran and a "Section of Agriculture" in the Ministry of Public Works staffed only by a director and a clerk, there is at present no other sum spent by the Government on improving the agricultural conditions of the country. The situation is in fact deplorable and is worth considerable attention.

Another important question is that of land tenure. The village is the typical feature of land cultivation in Persia.

It consists of a group of dwellings with land stretching away on all sides, of which a certain portion is generally meadow and the rest cultivated fields. Owing to the lack of scientific methods of crop rotation and of fertilization the "two-field" and "three-field" system has been devised. Under this arrangement one field is usually planted with wheat, rye, opium and other crops sown in the autumn and harvested the following summer and the other with maize, peas, rice, or other crops planted in the spring and harvested in the autumn. By rotating the fields, each is given an opportunity every third year to recuperate. The cultivable plots are divided into sections for assignment to each peasant and as the fields are sometimes not uniform in fertility and ease of cultivation they are divided, more or less in proportion to the material ability of each peasant and the number of his household. In every village there is a headman called the "Kadkhoda," who is responsible to the landlord for the distribution and for seeing that the work is done properly by all, and the general supervision of affairs. He is assisted by junior headmen who in turn supervise small numbers of peasants. The above conditions are the most common in all parts of the country.

Land tenure may be divided into two sections: that in the possession of landowners who cultivate the land themselves and that held by landowners who have peasants to cultivate the land for them. In the first section fall most of the farmers who have become owners of the land.

The second group comprises all other landowners who do not cultivate the land but share the produce with the peasant who does all the work on the farm. There is, however, another class which rents the land from the landowner and acts in the place of the landlord in sharing the produce, but its members cannot properly be classed as farmers. In general, they are simply intermediaries who are interested in exploiting the peasant by means of exactions and cheat the landlord, if possible, by not paying him any rent.

The system of dividing the produce between the landlord and the peasant differs in every locality. It is, however, commonly based on five factors: (1) land, (2) water,

(3) seed, (4) working capital, (5) labour. In most parts of Persia it is customary for the landlord to provide land, water and seed, while the peasant is responsible for labour and working capital in which are included implements, fertilizers, animals, etc. The produce is accordingly divided into five parts and is shared in proportion to the amount contributed by each party.

In the provinces where cultivation is not dependent on irrigation the peasants receive two-fifths of the produce and the landlords three-fifths. There is also a good deal of land situated near the foot of mountains and hills cultivated by peasants who provide the seed as well as all the labour and which does not require any irrigation. In such cases the peasants retain three to four-fifths of the produce, while the landlords receive the remainder as rent in kind. The produce of all plants which require large expenditure, such as opium and tobacco, is divided equally, in which case the peasant provides the seed. On the whole it can be said that the division of the produce in each district depends on the quality of the soil, the amount of labour, and the kind of crop.

In theory the system might be considered reasonably equitable, but when actual conditions are studied the defects responsible for the wretched life of the peasants are soon noticeable. In the greater part of Persia, land has no value unless it is supplied with water. There are numerous tracts of arable and fertile lands which are left barren owing to lack of water, and consequently it is the water which gives utility to the land. From an economic point of view water and land must be grouped together as one factor, because neither would be of use without the other. There are numerous mountain streams which go to waste during the spring and millions of acres of land are left arid because there is no water to irrigate them ; and it is only by the combination of both that any profit can be reaped from them.

The third factor, seed, falls under the heading of working capital. The seed can be purchased at a fairly reasonable price, while fertilizers, the feeding of the animals, the repairs to implements and other items are much more costly.

With regard to working capital much can be said to discredit the system now practised in Persia. In short, the peasants generally do not possess any liquid capital and are exploited either by usurious moneylenders or by their landlords, who advance them money for the purchase of animals, implements, etc., at a very high rate of interest and recover the advances at harvest time. In fact, what the peasant receives at harvest time is only factor No. 5 mentioned on page 20, i.e., labour, entitling him to one-fifth of the total produce.

The lot of the landless peasant in Persia is a miserable one, and a life of privation is his only prospect. Many are on the point of starvation for the greater part of the year, while others have to content themselves with barley-bread only.

With regard to the holding of land, Persia must be classed among those countries where large proprietors predominate. The State owns practically 4 per cent. of the total acreage and next to it come the clergy, the princes, and other rich men who all own large numbers of villages, some of them having holdings in a great many provinces. The best cultivated lands are those of the small holders who either cultivate it themselves or supervise the cultivation by frequent visits to their farms.

According to Persian law any person who brings barren land under cultivation is legally the owner of it. This, however, is a very costly undertaking in the central regions situated on the plateau, which entails the outlay of large capital for canalization, building dwellings for the peasants, and other expenditure. A large number of villages formerly owned by the Government and now sold or transferred to private owners constitute the bulk of the cultivated area. These became the property of the Government during the 18th and 19th centuries, mostly as a result of confiscation and partly as a result of Nadir Shah's régime when he ordered the sequestration of all the lands endowed for pious foundations.

## CHAPTER III

### AGRICULTURAL PRODUCTS

"My father's kingdom," said Cyrus the Younger, "extends so far to the south that men cannot live there because of the heat, and northward to where they cannot exist because of the cold." This proud boast may be taken almost literally ; for Persia is a land of extremes.

Persia possesses every variety of climate, from the extremes of tropical heat near the shores of the Persian Gulf to the snow line in the high plateau in the central regions. This difference of the climate brings about a variety of agricultural produce. The country at the present time can offer a list of agricultural products, which, if not in bulk, at least for its variety of detail, can be equalled by few other countries. I should content myself with those kinds of products which are considerable in amount, and are capable of improvement, not only for domestic use but for exportation.

#### CEREALS

Wheat and barley (the latter of which is commonly used as fodder for horses) are grown throughout the country ; but in greatest plenty in the provinces of Azarbaijan, Kirman-shah, Luristan, Khuzistan, Fars, Khorasan, Kirman, Yazd and Isfahan. In spite of the thousands of acres of agricultural land lying idle, particularly in the southern and western districts, the growth of wheat is already in excess of the needs of the home population ; and grain is exported in some quantity to Turkey, the Caucasus, India, and even to England and Germany. The total value of cereals exported from Persia in 1921-22 was over 4,000,000 krans. Oats and rye are not grown ; there is not much maize, but millet is produced in parts of the country.

## RICE

Rice is largely cultivated in the low lying strip of the Caspian littoral and to some extent in other parts of Persia, viz : Azarbaijan, Luristan, Isfahan, Fars and Kirmanshah. The bulk of Persian rice comes, however, from the province of Gilan which, according to estimates, produces five-sixths of the rice exported from the country. The product of other parts is locally consumed, being a universal feature in every meal. The area under rice cultivation is 102,960 hectares in Gilan alone, and the annual produce is about 72 million kilograms. Before the war the value of Persian rice exported to Russia was about 28 million krans, but this has now declined to 13 million as a result of the recent trade difficulties in Russia.

## SUGAR

In older times Persia was famous as a sugar producing country, and the plantations of Ahwaz and the Karun basin enjoyed a wide renown. But the sugar cane is now sparsely cultivated. Beetroot, however, is abundant, especially in Khorasan, and if properly employed in the use of producing sugar, could be utilized to reduce the tremendous annual importation of sugar from abroad, which in 1922-23 was 117,280,000 krans.

Sugar cane is grown in Gilan and Yazd, in the latter for local consumption. It is believed that the cultivation of sugar cane was formerly more important in the province of Mazanderan than at present, for it seems that it has been abandoned on account of the difficulty of extracting the juice. Cane is cultivated at present around the edges of cotton fields, but it could doubtless be cultivated profitably on a large scale on soil of the right sort. The zone of cultivation is found in the rectangle formed by the Caspian Sea and a parallel line passing Amul, Barfurush and Sari.

During the war, the price of sugar greatly advanced in Persia, owing to the cessation of imports from Russia ; as a result, cultivation was then taken up. It is estimated that

the harvest of 1917 totalled about 120,000 Batmans (about 720,000 pounds). The production is about 1,600 pounds per acre.

There are two kinds of sugar cane grown in the province ; first, the Indi Lale, the seeds of which are planted, which produces a sirup about the consistency of molasses of grapes ; and secondly, the Sheher Lale, of which one plants the shoot ; this yields a moist sugar which can be solidified.

Before the war, when Russians, through their oppressive tariff treaties with Persia, could send sugar to Persia and kill the native industry, the profits from local cultivation were very small, and peasants could plant only around the edges of fields in small quantities. Also, this sugar was not sufficiently refined to enable it to compare with Russian or French sugar. Moist sugar is worth at least twice as much as the sirup obtained from Indi Lale.

Sugar cane is planted in the spring and must be harvested in the autumn before the advent of frost. The fields must be well tilled, and much moisture is needed, as in dry years good crops are not obtained. When the crop has been cut it is stacked on the ground, and a hut is erected nearby for boiling the juice. Four oxen are needed for crushing the cane. The juice is boiled during the night, and about 50 mans (300 pounds) of dry reeds are used as fuel in one night. The process necessitates the presence of at least four men. When done, the sugar is poured into moulds and removed as soon as it is cold.

#### TOBACCO

Persian tobacco is known in every town and village in the western half of the Asiatic continent. A European traveller once remarked that " though not a smoker he never failed to succumb to the subtle influence of the Shiraz tumbaku (tobacco), a few perfumed inhalations of which are sufficient to fill the remotest cells of the brain with an Olympian contentment."

Tobacco is cultivated much more than in former times, but its export has decreased, owing to domestic consumption. In the few years preceding the war, cultivation also declined.

For example, the Kahno Mehrouyeh and other good fields stopped growing tobacco. Domestic consumption is still increasing, and to revive the export of tobacco it will be necessary to manufacture it in the country. Small factories for cigarette-making are numerous now in large towns, but cigars are neither used in Persia nor exported. Because of cheap labour and because of the suitability of Persian tobacco for cigars, it would be easy to plant and export tobacco which is better suited for cigar-making. This would result in increasing the supply for export as well as for home consumption. In 1922-23 the export of tobacco amounted to 4,309,000 krans.

#### OPIUM

From very remote times the poppy has been cultivated at Yazd for the home market. It was in 1853, however, that one finds the first record of opium having been made an article of export from the district of Isfahan; though it was not till the collapse of the silk trade that the poppy was at all widely cultivated. The chief areas of cultivation are Isfahan, Shiraz, Nairiz, Khonsar, Kirman, Khorasan, Yazd, Kazarun, Burujird, Hamadan and Kirmanshah. In the infancy of the trade, the drug used to be sent to Java, whence it was reshipped to Hongkong and Singapore, thence to Aden, and afterwards to Suez for transhipment. The purest quality is now shipped to London for the extraction of morphine, and is in part re-exported to America. Three-fourths, however, of the total export go to China via Hongkong. Persian opium has already driven the Turkish article out of the Chinese market, and is now competing with the Indian product. The total export during 1922-23 was 40,908,000 krans.

The Persian Government has definitely stated that it would favour the reduction of opium cultivation, provided that other countries interested in this reduction help Persia to replace the opium crop by the cultivation of other crops. It is hoped that this will be done and the cultivation of this dangerous drug may be replaced by a more suitable crop.

**MEDICINAL PLANTS**

Gum-tragacanth, a low thorn bush, is collected in the hilly country from Kirman to Kirmanshah, and is exported, the best qualities going to London, the inferior to Russia. Gum-Arabic is extracted from the Konar tree in the south near Shiraz. Gum-ammoniac, galbanum, and sagapenum are produced in the neighbourhood of Isfahan, Shiraz and Khorasan. Opoponax, sarcocolla, colocynth and scammony are also known. The valuable but odoriferous gum known as asafoetida is extracted from a desert plant that grows near Birjand and Tabas in Khorasan, and in many parts of Persian Baluchistan. The dried leaves and stem of this plant are also used in the form of a decoction for various ailments, and in solid form as a medicinal condiment. Liquorice also grows wild everywhere. The total export value of medicinal plants and gums in 1922-23 was 10,383,000 krans.

**COLOURING PLANTS**

The number of plants providing popular or serviceable dyes is very considerable. Indigo is grown in the south-west near Shushtar and Dizful and in Luristan. It is used in the dyeing of cotton and also (mixed with henna) in the colouring of hair. Henna is cultivated near Yazd and Kiman, and is said to contain more colouring matter than any other species. Madder-roots, saffron from Yazd and Burujird and gall-nuts from the oak of Kurdistan, must be included among the valuable products; although the lamentable introduction of aniline dyes has diminished alike the growth of and the demand for, home-grown colouring plants. The export of colouring plants in 1922-23 amounted to 1,559,000 krans.

**TIMBER**

In the interior of the country there are many places where different varieties of trees are to be seen, while in some other parts one can travel over hundreds of miles and see little or no timber. The rich humid valleys of the Caspian belt and the lower slopes of the Alburz range rising therefrom, produce timbers of great variety and value, some of which are well adapted for ship-building. Boxwood has existed in

abundance in this region, and has been exported in some quantity to Astrakhan, to Rostov on the Don, and even to Liverpool ; but no system or science of forestry exists, and because of the absence of regulations the forests have been nearly exterminated. Among other trees that are here met with are the oak, ash, beech, elm, elder, cherry and thorn—all, or nearly all, belonging to the deciduous class. Konar trees in Arabistan, cypresses at Shiraz, groves of dwarf oak in the mountains of the south and west, corresponding to the juniper of the Khorasan ranges, walnut and mulberry trees, planes and Lombardy poplars, are to be found more or less all over the western part of Persia.

The timber-producing regions of Persia may be classified as follows :—

(1) Mazanderan and Gilan provinces which border the Caspian Sea. Here is the richest timber region of the country. It produces every variety of fruit tree as well as those above mentioned. Some parts of it are so thickly crowded with old trees that passage through it is impossible. If the Government would make certain rules for the preservation of these forests, as well as for afforestation, it would soon be unnecessary in this part of the country to import Russian timber for house building purposes.

(2) The province of Fars is the second timber producing region of Persia. In this province the forests, though not as extensive as in the north, have a different variety of fruit trees which supply the local needs : such as oranges, lemons, pistaches, almonds, etc. If properly taken care of, these trees could be made to produce sufficiently to render possible the export of these fruits to foreign countries. The trees in this part are not so well grown, because the Arabian peninsula attracts nearly all the moisture of the Persian Gulf, very little being left for the Persian coast.

(3) The third region is the Kurdistan section. Here figs, almonds and other trees are found extensively. In times of famines the Marivan, Baneh and Javanrood districts supply the local population with their products, and in times of prosperity with their timber and charcoal.

(4) The district of Luristan is one of the best timber districts of the country. In Alishter, in Bastam, in Chaginy, Khavah, Tarhan, along the Samieh and Kashkan coasts, in Kuh Dasht, Sakvand, etc., are to be found the greater portions of these forests. These are much better than the Fars forests, and they have also a greater variety of trees. If properly kept, they would provide timber for the whole southwestern part of the country and probably would make possible export to Iraq. A serious trouble in this part of the country is that the nomads who live there often burn the forests on a large scale to provide pastures for their flocks. In recent years, and especially during the war, they have cut down a large number of trees. It is indeed a pity that they are not prevented from doing this, for the results are economically disastrous to this section of the country.

Although there was this supply of forests at hand, the imports of wood and manufactures of wood into Persia during the year ending March 20, 1923, were valued at about 3,805,000 krans.

#### COTTON

Cotton grows with facility in Persia anywhere up to an elevation of 5,000 feet above the sea. Persian cotton, however, is very short in the staple. Mazandaran, Astrabad, Khorasan, Samnan, Qum, Kashan, Isfahan and the districts of Azarbaijan lying around Khoy and Urumiah, are the chief centres of cultivation ; but it is planted on a small scale all through the country. The industry first received a form of impetus at the time of the American Civil War, and continued to grow till the Russian Revolution broke out. Russia was the chief buyer of Persian cotton, and before the War purchased 92,843,612 krans worth, representing about 200,000 bales. The remainder of Persian cotton is spun in the hand-looms and is absorbed by domestic consumption.

Before the War Russian buyers offered gratuitously cotton seeds to Persian cultivators and the seed was imported from Turkistan. The American seed has been imported for the past two years and is now being widely grown. The climatic conditions of the central plateau are best suited for

the short staple cotton, but there is the virgin province of Khuzistan which can produce long staple cotton of the best quality.

Cotton goods and cotton yarns, the latter mostly used in the carpet industry, stand at the head of imports into Persia, amounting to no less than 200,000,000 krans, while Persian exports are only sufficient to cover less than half of this sum. It has been claimed by certain experts of the world cotton industry that the days of the unlimited supply of cotton are over, and every effort must be made to increase the production and enable it to meet the ever-increasing demand.

The American and Egyptian cotton crops are declining, while the new mills started during the War are taking more and more of the Indian production. Russia's production of cotton has practically ceased, and, if renewed, would only meet part of her own needs, while other cotton producing countries can only partly meet the demands of the Lancashire industry or that of other countries.

There are great opportunities waiting for Persia in the field of cotton production. There has always been a great demand for Persian cotton in Russia, and this demand is bound to increase when the economic conditions of that country improve. Already, the trade officials of the Soviet Government are doing their best to stimulate the cotton production in Persia, and if they abandon their policy of restricting the trade, there is every hope that the production will increase. The lack of proper communications, capital, and trade facilities might impair grand schemes for the present, but there is no doubt that, owing to the increased demand all over the world, there may be bright prospects for the cultivation of Persian cotton in the future.

The province of Khuzistan, in the south-west, presents a very suitable area for cotton cultivation. Its proximity to the sea, its navigable river, the Karun, its fertile soil and its suitable climate, need only be taken into consideration to convince one that a second Egypt could be made of this district. It requires only capital to develop the cotton plantations in its vast plains and thus contribute to meet the

urgent need of cotton supply so acutely felt by industrial countries.

Moreover, Persia is quite capable of developing a cotton industry of its own to meet its home demands. A spinning factory has been started in Tabriz during the last three years and a much larger one is being put up in Isfahan. A start has been made in the right direction and it only remains to be seen whether it is carried to a successful end.

#### SILK

The silk industry, which first brought Persia within the ken of modern Europe, was formerly very profitable, but after the appearance of disease in 1864 it declined for a long while. In the seventeenth century Chardin estimated the silk crop of Persia is to be about 4,000,000 pounds, the greater part of which was produced in the province of Gilan. Chardin's estimates have, however, been disproved, and in the first part of the eighteenth century Jonas Hanway, the director of the silk trade in Gilan, gave the total of the production as about 220,000 pounds. A century later, owing to the improved prices of silk in the European markets, this total reached 2,000,000 pounds, but by 1876 it had declined to 202,800 pounds. As a result of this decline, sericulture disappeared and Persia had to import the egg from Japan. In 1890 the Turkish egg was introduced and since then the Turkish and Russian eggs have been imported for the most part. From 1890 onwards there has been a revival of this industry and before the war the production had risen to 1,200,000 pounds, 88 per cent. of which was produced in Gilan.

The centres of production are the northern provinces and to a small extent Yazd and Kashan. About three-fourths of the product is exported to France, Italy, Russia and Turkey.

The War checked this production again and stopped both the import of eggs and the export of raw silk. Much is now being done to revive this industry, and a French Syndicate has made an offer to the Persian Government for the monopoly of importing the eggs and improving the

production. The climate of most parts of Persia is favourable both to the mulberry tree and the silk-worm. The ready market which the silk finds both at home and abroad is a great encouragement for the development of production—which can be done by placing the whole question of the importation of eggs under the supervision of experts, and by teaching the producers scientific methods of production.

#### FRUITS

“The fruits of Europe and Asia,” says Earl Curzon, “meet and fraternize upon Persian soil.” In the natural hot-bed of the Caspian belt many of the former, such as vines, plums, hops, raspberries, apples and pears grow wild, but are valueless in that state. The least cultivation would produce melons (reported to be the finest in the world, two of which are sometimes a load for a single beast of burden), nectarines, peaches, apricots (of which, when dried, there is a large export to the Caucasus and to Russia), oranges, pomegranates, cherries, tamarinds, mulberries, magnificent quinces, figs, pistaches, almonds. Dates are grown to a considerable extent upon the shores of the Persian Gulf, and are a source of an important trade both to east and to west. In the neighbourhood of Rudbar, on the road between Resht and Tehran, and on the confines of the province of Gilan, there is an isolated, but plentiful, cultivation of the olive. The process of extracting the oil is very crude and laborious, so that a great deal is wasted.

The Persian fruit exports during 1922-23 amounted to about 33,640,000 krans in value.

#### FISHERIES

The principal fishing industry of Persia is situated along the southern shore of the Caspian Sea. The sturgeon, silure or sheat-fish, salmon, trout, carp, pike-perch and herring are the most common specimens caught. In general, fish are scarce inland in Persia; but salmon, trout and mud-trout are plentiful in most of the mountain streams.

In 1867 the Government granted an exclusive concession for fishing on the southern coasts of the Caspian Sea to a

Russian subject called Lianazoff, who has since established a large industry with modern fishing stations in the principal ports of Persia. Before the War over 4 million batmans of fish (25,000,000 pounds) were landed annually on the Persian coast of the Caspian Sea, the greater part of which was exported to Russia. In addition, about 540,000 pounds of caviare were produced, and were exported through Russia to other European countries, being better known as Russian caviare.

This industry was working very well before the War and brought in an annual revenue of about £20,000 to the Government. Since the Russian revolution the exports have fallen considerably, the royalties have not been paid by the concessionaire and the Persian Government have suspended the latter's operations. The Russian Soviet Government are placing innumerable difficulties in the way of the Persian Government for carrying on this industry and wish to take over the concession. The Persian Government have refused to yield to this demand ; according to a decision issued by a court of arbitration formed to settle Liazanoff's claims, the latter's concession is declared valid.

The fishing industry of Persia has now come to a standstill owing to the unreasonable demands of the Russian Soviet Government ; some time ago a Russian gunboat carried away by force a large quantity of caviare from one of the Persian fishing stations without any authority or permission.

#### THE VINE

As an article of commerce, grapes are sold chiefly in a dry state, the raisins finding a large sale in Russia and Turkey. From the south the fresh grapes of Shiraz are sometimes packed in cotton-wool and sent to India. Throughout the country this fruit is very abundant, and is met with in many varieties. It is, however, in its manufactured state that it has from time immemorial contributed to the merriment of a naturally hilarious people. Over two thousand years ago we have the testimony of Herodotus that " the Persians were much addicted to the consumption of wine, fortified by the delicious story that they were accustomed to deliberate first

drunk and then sober whilst if by accident the initial process were reversed, they made amends by reopening the discussion in the proper phase of intoxication."

Persia possesses at present several vintages of good repute, and one or two of a very superior reputation. The three principal zones of the vine are Azarbaijan in the north-west ; Shiraz in the south, and Khorasan in the north-east, and the chief centres of manufacture are Shiraz, Isfahan, Kazwin, Hamadan, Kirman and Yazd. The wine of Shiraz has by far the greatest celebrity, both foreign and domestic, being of the quality of an old sherry, and, particularly after being kept for a few years, constitutes an excellent beverage. The wine of Hamadan resembles a hock. Isfahan manufactures two moderate varieties, a white wine with a Muscat flavour and a red wine of the nature of port. The Yazd wine is said to be of a very delicate flavour, the Kirman wine to be strong and rough. The appliances employed for manufacturing wine are of the rudest description. The export of Persian wine at present is very trifling ; but, looking to the facilities and the cheapness of manufacture, as well as to the neighbourhood of suitable markets, the industry is capable of expansion on a very large scale, and deserves encouragement.

Although Persians are strictly forbidden by the Quran to consume alcoholic liquors, yet in pursuance of the maxim that if drink is indulged in at all it had better be strong drink, they consume large quantities of abominable spirits which they prefer in the "neat" state to the choicest of wines. Araq, a spirituous product of the grape with aromatic flavouring, is very popular, and large quantities of this spirit are yearly made for home consumption. I believe that the manufacture of such spirituous liquors as are consumed in neighbouring countries might become a profitable item of commerce, if their manufacture were extended in Persia.

#### HORSES

In the animal world Persia can boast, if not of many, at least of exceptional, sources of wealth. One has only to remember the fact that animals such as mules, donkeys, horses, and camels have been and still are the chief means of

transportation in the country, and so obtain some idea of the scope of the trade in them. The indigenous breed of horses is widely known throughout the East. Three types are obtainable in different parts of the country ; in the north is the Turkoman, famed for its powers of endurance ; in the south is the Arab, originally imported and constantly recruited from the opposite coast of the Gulf ; and the Persian, which was originally a cross between other strains.

#### MULES

Better known even than the horses are the mules of Persia. These excellent animals, although of no great size (being far inferior in this respect to the Spanish type), are possessed of extraordinary strength and endurance. Burdened with a load of from 230 to 350 pounds, they will cover distances of twenty-five to thirty-five miles in a day at the rate of four miles an hour, for days, and almost for weeks, at a time. Most of the internal trade is carried by these animals. The chief breeding zones are the districts of Isfahan, Shiraz and Kazarun in the centre and south, and the Bakhtiari country in the south-west and west.

#### CAMELS

The one-humped camel of Persia is well-known all over the world. He will not travel so rapidly as a horse, but he will carry double the burden. During 1921-22 Persia exported a total of 2,607,000 krans of animal stock.

#### HIDES

Skins and hides are exported in large quantities to America and Europe from Khorasan, Isfahan, Shiraz and Hamadan. Hamadan is the scene of the principal tanneries and leather factories in Persia, and there the material known in Europe is originally prepared. The preparation of leather has been very primitive, and until recently no modern machinery has been employed. But a few years ago a factory of the modern type was put up near Tehran, where it produces leather of every kind, but is used mostly in the manufacture of shoes. The total value of skins exported in 1922-23 amounted to 16,627,000 krans.

## WOOL

An increasing amount of sheep's wool and goats' hair is now being exported from Persia. The chief areas of production are Khorasan, Fars and Luristan, Azarbaijan, Kirmanshah and Kurdistan. Of these, the Khorasan flocks and those of the nomad tribes on the Perso-Afghan border give the best wool. A large amount of the wool is exported, while an equally large amount of it is used in the manufacture of shawls, woollen cloths and carpets. Before the war more than 11,500,000 krans worth of raw wool was exported, but this has now fallen to 4,808,000 in 1922-23.

The above general review of the agricultural products gives some idea of the potentialities of the soil, the variety of the products, and the infinite possibilities which can be found in a virgin country like Persia.

The improvement of agriculture depends on modern transport. With a system of cheap communication the production can be increased and the export trade developed. The latter will in turn stimulate the production to be undertaken in an efficient manner in order to obtain the highest results. Meanwhile, the first among the agricultural reforms to be undertaken is to improve the standard of living of the peasants. Any step in this direction is bound to reflect on the general production of the country. The relations between the landlord and the peasant must be defined with a view to provide for the material happiness of the latter.

Agricultural education, seed selection, the use of modern machinery, the development of the irrigation system, medical assistance for the peasants, universal inoculation of the cattle against rinderpest, the adoption of chemical manures, and other reforms are among some of the things which will improve the material welfare of the people.

## CHAPTER IV

### MINERAL RESOURCES

THERE are no authentic records, based on a systematic and scientific survey, to show the value and extent of the mineral wealth of Persia.

The Arab historians have written a good deal about the Persian mining industry in the past, and there are traces of such operations found in many parts of the country which can only be referred to the period before the Arab conquest.

From the sixteenth century onward we find such records as those of Chardin, Tavernier, Hanway, Polak, Tietze and Curzon who relate their personal observations and conjectures. For instance, Chardin wrote that the attention of Shah Abbas the Great was drawn to the presence of valuable metals beneath the soil which he seriously attempted to utilize. He spoke of iron, lead, copper and steel as the minerals most worked at that time and specified silver mines in Isfahan, Kirman and Mazanderan; iron mines in Mazanderan and Kurdistan; copper mines at Sari and near Qazvin; lead mines near Kirman and Yazd; naptha springs in Mazanderan; and turquoise mines near Naishabur.

In the days of Nadir Shah, when Persia had regained fame by the successive conquests of that great monarch, an iron foundry was established near Amul, where canon-balls and bomb-shells were cast, and other mining operations were carried on in other parts of the country.

About the year 1810, an Englishman named Williamson worked some copper mines near Turkomanchai, but was obliged to abandon them as a failure. In 1815, Captain Monteith was commissioned by Prince Abbas Mirza to report on the best locality for iron works, and decided in favour of

Dombre, south of the Aras river, saying, "In no part of the world did we conceive it possible that a greater abundance of iron ore should exist than in the Qaradagh range of mountains. For many farsakhs the soil appears to consist of no other stone."

In 1836, Sir H. Lindsay-Bethune, having obtained certain concessions from the Shah, brought out a steam engine and a number of skilled workmen from England, in an attempt to work both the iron and copper mines of Qaradagh, but later on abandoned the works because of the absence of any satisfactory results.

In 1890, a company with a capital of £1,000,000 was formed to acquire and work the mining rights conceded to the Imperial Bank of Persia. A number of engineers were sent out to prospect the country, and though the concession was never worked, the reports of these engineers may be said to contain some useful information. Since then, private enterprises of one sort and another have surveyed the land, and it is now possible to locate more or less the larger part of the mineral resources of the country.

The largest deposits of iron are to be found in the Alburz range, and these have been more freely exploited than others. In this region the iron and coal mines are generally found in close proximity to each other. Near Amul, in the province of Mazanderan, there are several iron mines, the ore of which is said to contain from fifty to sixty per cent. of iron.

In the Qaradagh mountains of Azarbaijan there are many iron mines which have been reported on favourably both by Europeans and Persians who have worked them. According to Melgunoff there are also some rich iron deposits in the province of Astrabad, and Tietze has written about the Kuh Surmah in Najafabad and Kuh Yatim in Fereidan, both near Isfahan, which contain large deposits of iron.

A vein of iron ore containing 60 per cent. of metal has been discovered at Qamsar, near Kashan, where it is reported that 100,000 tons of ore are lying on the slope of the hills. Near Nairiz are the iron mines which Marco Polo and Chardin spoke of as steel mines and which were extensively worked

in the past. Early in the War the Russians prepared to undertake active development in the vicinity of Lake Urumiah, where extensive coal and iron deposits were discovered in close conjunction, the iron ore being reported to assay as high as 70 per cent.; but, although large quantities of machinery were imported, production was not undertaken owing to subsequent political events.

The southern slopes of the Alburz Mountains are said to contain numerous coal deposits. Polak has mentioned the valley of Lar and others have spoken of the district of Jowshegan, as the places where large supplies of coal exist.

Copper is found in the province of Khorasan between Shahrud and Sabzawar and some writers have claimed that there are between 200 and 300 different copper mines in this district. In the province of Azarbaijan, there are abundant proofs of copper deposits while there are other deposits of the same mineral in Samnan, Kirman, Jowshegan, and Khamsah. Polak declared that every district in Persia had its own copper mines, and this statement has been confirmed by the numerous deposits which occur in all parts of the country.

The turquoise mines of Naishabur are very famous and have been worked for the past eight hundred years. There is a turquoise mine in Kirman and another one is found near Saveh.

Petroleum deposits are well known to exist in many parts of south, north and western Persia and have been dealt with in a separate chapter.

Melgunoff speaks of signs of platinum deposits near Damghan and silver deposits near Astrabad. Tavernier referred to a silver mine at Karvan, near Isfahan. Lead mines mixed with silver are found in Khorasan, in Anguran and Afshar, both near Zanjan, and also in Kirman.

Mercury exists in Zardeh Kuh range, to the north-west of Isfahan, and Arab historians have recorded the occurrence of mercury in the village of Takht-i-Sulaiman, near Zanjan.

Antimony, nickel, asbestos, lead and cobalt are found near Anarak, in the district of Nain, between Isfahan and

Yazd. At Dehkhargan there are some marble quarries ; and a yellow, semi-transparent marble is obtained in the mountains near Yazd. Lead is found in the district of Kub-benan at Kirman ; manganese at Keruzeh, sixty miles from Kirman ; borax comes from Shahr-i-Babek district, to the north-west of Kirman ; and asbestos is found near Gujar, eighty miles north of Kirman.

The other minerals which are found scattered through different parts of the country are nitrates of soda and potash, alum, sulphur, saltpetre near Zanzan and Qum, zinc near Yazd, tin between Shahrud and Astrabad, and red oxide in the island of Hormuz.

The following list will, in addition, explain all the mines at present worked :

## LIST OF DEVELOPED MINES

	District	Province
SALT MINES		
	Hasan Abad, Firuzkough	Tehran
	Najm Abad, Ishtehard	"
	Soussanghein, Saveh	"
	Sussarak, Taleghan	"
	Kharaghan	Qazvin
	Garrus	Zanzan
	Zaitour Abad Tarum Olya	"
	Tarom Ilya and Sofla	"
	Neighbourhood of the river Aji	Azarbaijan
	Seffidan	"
	Khoy	"
	Sarab	"
	Sultanabad Chahar Oymagh	"
	Bonab	"
	Solduz	"
	Dizaj, Urumiah	"
	Haris Arvanagh	"
	Arnagh Arlan, Marand	"
	Surkheh	Mumin Abad
	Lasguer	Samnan

# 34 THE ECONOMIC POSITION OF PERSIA

	District	Province
<b>SALT MINES</b>		
	Qum	Qum
	Rudbar, Moghan	Sultanabad
	Golpaigan	Golpaigan
	Kashan	Kashan
	Ardistan, Nain	Yazd
	Bandar Abbas	
	Khurmus and Karun Sofla	Khuzastan
	Barf Abad Savojbulagh	Azarbaijan
	Eyvan Key	Tehran
<b>TURQUOISE MINES</b>		
	Omar Loo, Naishabur	Khorasan
<b>COPPER MINES</b>		
	Sabzevar	"
	Dahane Siah, Sabzevar	"
	Anarak	Yazd
	Bahr Asseman	Kirman
<b>BLACK ALUM</b>		
	Abuzaid-Abad, Siah-Kouh	Kashan
	Tarum Olya and Sofla	Qazvin
	Jabal Shomali	Yazd
<b>COAL</b>		
	Aruheh Lar	Tehran
	Darbandsar, Rudbar Ghasran	"
	Marthah Lar	"
	Darbandsar, Rudbar Ghasran	"
	Abyek, Lavassan	"
	Arouhe, Savoj-bolagh	"
	Ghomsheh	Isfahan
	Rudbar	Tehran
	Shemshak	"
	Kastanak, Lar	"
	Routan, Rudbar, Ghasran	"
	Sefid Darreh, Fashand	"
	Ambarak, Rubdar	"
	Sari Dagh	Azarbaijan

	District	Province
COAL		
	Pari Khan	Shahrud
	Abyaneh and Soo, Natanz	Kashan
	Isfandagheh	Kirman
ORPIMENT		
	Zereh Shouran, Sain Qaleh	Azarbaijan
MILL STONE		
	Kuh Ghonagh, Zarand	Tehran
	Southern Ports	
SULPHATE OF SODIUM		
	Between Tehran and Qum	
SULPHUR		
	Haji Abad, Samnan	Samnan
	Sabzavar	Khorasan
LEAD		
	Darband Kalak	Tehran
	Akhrameh Meshad	Khorasan
GRAPHITE		
	Silvar, Mazareh Darreh Murad Bagh	Hamadan
IRON		
	Karaj and Dushantapeh	Tehran

The above remarks are, I believe, quite ample to prove the variety as well as the extent of the mineral wealth of Persia. Their true value can, however, be ascertained if a general survey of the country is undertaken by experts.

Since the Constitutional Régime minerals have been declared to be State property, and the mines are either leased by the Government or worked under a concession. What mining is done now, is according to the traditional methods of the past and is very primitive. The mines are worked in shallow ore-shoots and they are sometimes filled with water.

The most important reason for the undeveloped state of the minerals is to be found in the lack of modern methods

of transport. As an example, I will refer to the coal mines which are situated near Tehran. At the mouth of the pit, about 50 miles from the town a ton of coal would cost about £2 ; and when it is conveyed on donkeys, mules, or camels to the city, it is sold at from £6 to £7.

The two essential conditions for development of the mineral resources are improved communications and cheaper fuel. The former cannot be hoped for in the absence of railways, but given these, the oil-fields should ensure an ample supply of the latter.

## CHAPTER V

### THE OIL INDUSTRY

PERSIA is one of the few countries in which numerous spontaneous springs and seepages reveal the existence of oil. Throughout the vast range of mountains and hills which intersect each other all over Persia repeated occurrences of oil have been noticed, and for hundreds of years the inhabitants have collected the oil by rudimentary processes and have used it for lighting and medicinal purposes.

For over a generation after the discovery in the United States of America that wells had to be drilled for hundreds of feet into the earth before there was any chance of oil in commercial quantities being secured, the Persian fields lay untouched, none of the great oil companies of the world looking upon them as of sufficient value to repay the heavy cost of sinking test wells in the regions remote from the sea where it was thought oil might possibly be found.

It is only in recent times that the exploitation of oil under modern methods has started. The first attempt to search for oil, from an industrial point of view, was made by the Persian Mining Corporation—a company formed under the auspices of the Imperial Bank of Persia, which had secured a concession for the whole of mining rights of Persia. This Company sank two wells at Daleki, near Bushire, close to a spring from the surface of which the Persians had been in the habit of collecting petroleum. The results were so very meagre and the question of transport so difficult, that further operations were abandoned, and later on the whole concession was given up.

In 1901 an Englishman named William Knox D'Arcy, who had made a fortune through mining in Australia, heard from a Persian friend named Kitabji of oil seepages in Persia and secured from the Persian Government an exclusive right

to drill for, produce, pipe and carry away natural gas, petroleum, asphalt and ozokerite throughout the Persian Empire, except the five provinces bordering on the Caspian Sea. The concession was for sixty years and covered 500,000 square miles of territory. It was obtained from the Persian Government for the sum of £20,000 in cash and £20,000 in shares. The Persian Government was to receive 16 per cent. of the net profits of any company or companies formed to work the concession, and the products of the Company were exempted from taxation.

The terms of the concession were quite favourable, owing to the fact that nothing was then known definitely about the occurrence of oil in commercial quantities and that the Persian Government did not realise the importance of oil at that time. All the same, the benefits of such an industry to Persia have been of a very great value.

In 1903 the First Exploitation Company was formed to work the concession, with a capital of £600,000. At first the operations were begun at Chah Surkh, about one hundred miles west of Kirmanshah, where for many years a primitive oil-industry had been established. In 1904 two producing wells were brought in, one of them flowing at the rate of two hundred barrels a day. The remoteness of the field, however, proved that the oil found was of merely local value, the region being six hundred miles from the Persian Gulf, and it was difficult as well as costly to ship the oil to the world markets. It was then clear that oil must be found in some more accessible district if the venture was to be a success.

By this time D'Arcy, having spent more than £300,000 was forced to look for financial help. In 1905 the D'Arcy Concession Syndicate, financed principally by the Burmah Oil Company, was formed to take over the further exploitation of the Concession.

The first step taken in the new policy of development was to transfer the scene of operations from Chah Surkh to Memetain in the Karun River area.

Here also the results were disappointing. In the meantime, however, the attention of D'Arcy was drawn to a new area in the Bakhtiari Hills about 145 miles from the Persian

Gulf. The scene of operations was transferred to this place called Maidan-i-Naftun, and drilling was commenced.

Finally success came to D'Arcy. After seven years in all had been spent in drilling test wells in these various areas, on May 26, 1908, the drill plunged through to the oil-rock and a black stream of oil accompanied by enormous quantities of gas, shot high in the air.

The productivity of Maidan-i-Naftun was amply proved by this prolific well and the world came to know of one of the most productive oil-fields yet discovered.

At this juncture fresh capital was needed for delivering and refining the oil to the world markets. In 1909, the Anglo-Persian Oil Co. was formed with a capital of £2,000,000 and a debenture issue of £600,000.

Since then the great work of laying pipe-lines, building storage tanks, constructing metalled roads, railways, and erecting a refinery at Abadan went on as rapidly as the difficult nature of the country and the numerous obstacles which bar commercial undertakings in a remote country would permit. By August 1912 the Company had constructed a pipe line 145 miles long to bring its oil to the Persian Gulf and had built a part of its refinery at the island of Abadan. By October, the first delivery of refined products was made to local markets and the capacity of the refinery reached 6,000,000 gallons a month. It became clear in 1913 that further capital would be required for completing the task of constructing and bringing into operation a complete oil producing and refining system on a large scale.

The British Government were at that time very much interested in the subject of adequate supplies of fuel-oil for the British Navy, and as the exploitation of Persian fields revealed the existence of rich deposits, a commission of geological experts was sent to the spot to make an inquiry. On the conclusions embodied in its report the British Government decided to acquire a controlling interest in the A.P.O.C. by the purchase of £2,000,000 of the new ordinary shares. This amount has since been more than doubled.

Under the stimulus of the Great War, work was pressed on with all possible speed ; and since the War the record of

the Company's operations has been one of exceptional and continuous expansion.

The figures for the Persian output of crude oil have shown a steady and remarkable annual increase. From 233,962 tons in the year 1913-14 they went up to 1,106,415 tons in the year 1918-19, to 2,327,221 tons in the year 1921-22, to 3,714,216 in the year 1923-24 and for 1924-25 it is estimated that the output will reach 4,500,000 tons.

Of the vast area of presumably oil-bearing territory which the Company controls, only a small part has been brought into active development. At present it is only from Maidan-i-Naftun and the adjacent country that the Company derives its product, but prospecting and drilling operations are being carried out in other parts.

The extent of the Company's proved area has been considerably increased and, according to the latest information available, at any point of this area a bore can be put down with the certainty of tapping oil.

The wells in the proved area are also remarkably rich ; one of them has up to date given a total yield of about 6,000,000 tons, and its rate of production shows no signs of falling off ; another well flows at the rate of 1,000,000 tons per annum. These are only typical of the wells opened up so far and similar prolific wells are being found as the extent of the proved territory is increased.

It has been stated that if the Company were to tap all the wells already opened they could at once bring the production up to 10,000,000 tons p.a., and that by drilling in the wells which have been carried down to the cap rock the production could still be further augmented.

From the above remarks it will be seen that the oil deposits of Persia are so rich that it will soon be necessary to increase the equipment, pipe-lines and refineries, to deal with future production beyond the figure of 5,000,000 tons per annum. There is no doubt that Persia, which now ranks as the fourth oil producing country in the world, could soon attain a higher rank if all its oil resources, including those of the northern provinces, were to be developed to their maximum.

The Persian oil industry has brought blessing on two nations, i.e. the British and the Persians. It would not be out of place to mention these advantages in brief in order to show how rich and useful the Persian resources can be to foreign investors and how beneficial they would be to the Persians if other industrial undertakings were encouraged in Persia as well.

The advantages to the British Government—a partner in this concern—apart from assuring its large supplies of fuel-oil for the Navy both during the War and after at a more reasonable price can best be explained by citing Mr. Winston Churchill's references to this question in his book, "The World Crisis."

Mr. Churchill estimates the amount gained and saved by the British Government by its participation in the Anglo-Persian Oil Company at £40,000,000. In this he includes the market value of the Government's five million shares, which he puts at £16,000,000; the dividends and various taxes received £6,500,000; the amount actually saved on the oil purchased as compared with current prices, £7,500,000; and the further savings estimated on the balance of the Contract, for which he allows £10,000,000.

The advantages to the British shareholders and the Anglo-Persian Oil Company have also been considerable. The unlimited supply of Persian oil has enabled the A.P.O.C. to be not a mere local producing Company but a world-wide organization competing on equal terms with similar organizations. Since this Company became a revenue-producing concern in 1914, it has provided out of its earnings a total of no less than £19,000,000 for expenditure of a capital nature, and has so far paid out about £9,500,000 in dividends and debenture interest. The assets of the Company which now figure at over £40,000,000 could, on a modest computation, be valued at two or three times that amount, while, if the ultimate value of its oil-bearing territories in Persia is found, it might even be considerably more than this.

The oil industry has also meant a good deal to Persia, the royalties derived from it now constituting over 10 per cent. of the national revenues. Further, the Anglo-Persian Oil Co.

spends a large sum of money every year in the country for labour and supplies and employs over 25,000 Persians at the oilfields and refinery. In regions where formerly there was very little habitation or none, to-day are found towns given over almost entirely to the oil industry. Many fine roads, schools and hospitals have been established in the Company's area of operations and, above all, the exploitation of oil has brought modern industry into Persia. As a result, Persians now realise the immensity of the mineral resources hidden under their soil, and the fact that prosperity can come to them when these resources are properly developed.

A brief summary of the position with regard to the oil-fields of the five northern provinces excluded from the D'Arcy concession may not be out of place here.

In the latter part of 1921 the Persian Parliament passed a resolution approving the granting of a concession for the north Persian oil-fields to the Standard Oil Co. of America, and laid down certain conditions for this, among which was that the Concessionnaire should not assign or transfer this concession or enter into partnership with any other firm or person without the approval of the Persian Parliament.

Soon after this resolution was passed, certain representations were made to the Persian Government against the grant of this concession on the plea that this concession was previously granted to a Russian subject called Khoshtaria who had subsequently transferred it to the Anglo-Persian Oil Co. The Persian Government replied that the Khoshtaria concession was null and void because it had not been ratified by the Majlis which, according to Persian Constitution, is a prerequisite condition to any such grants. In this connection it is to be noted, however, that a part of the Khoshtaria concession was granted long before the Persian Constitution came into existence.

Some months later the Standard Oil Co. made an agreement with the Anglo-Persian Oil Co. for the joint working of the above concession. When the news of this agreement reached Persia, the Majlis voted an amendment to its previous resolution in June 1922, empowering the Government to

negotiate an oil concession in north Persia with any independent and responsible American Co. Subsequently negotiations were started with the Standard Oil Co., as well with the Sinclair Consolidated Oil Corporation of America. Later on the Majlis passed a law laying down in detail the basis of the concession which was to be granted to an independent American Co. These terms were offered to both Companies, and in December 1923, the Sinclair Co. accepted and signed an agreement with the Persian Government which was subject to the ratification of the Majlis.

This agreement was submitted in March 1924 to the Majlis for ratification and embodied the terms of the concession for four out of the five northern provinces—the fifth one being reserved for a Persian Co. which would be formed to work that province. The most important provisions of this Contract are as follows :—

- (1) The period of the Concession is fifty years.
- (2) The royalty payable to the Persian Government is 20 per cent. of the net profits ; this royalty would rise on a sliding scale basis to 28 per cent. in proportion as production increased.
- (3) The machinery and materials imported are exempted from customs and other duties.
- (4) The concessionnaire undertakes to float a loan of 10,000,000 dollars for the Persian Government through the medium of the American Banks and the concession is conditional on this loan.

In the latter part of 1924 the Sinclair Co. informed the Persian Government of its inability to provide the loan ; since then nothing further has been done in regard to the Concession.

The fundamental basis upon which the industrial life of modern nations rests is fuel. Before the War, Great Britain, Germany and the United States owed the greater part of their industrial power to coal. It has now been proved that it is essential to have control over fuel for economic

prosperity, and the nations which have the fuel can be assured of their progress.

Since the War the considerable advantages of oil over coal, such as its easier extraction, transport, and cost of labour involved, have been an established fact ; in future, oil is bound to become more and more important as a fuel.

Persia, although possessing enormous oil resources, has so far taken no advantage of them herself. Oil has been used in Persia only for lighting purposes and even for those the bulk of it is imported from Russia. In 1922-23 Persia imported over 17,000,000 krans worth of oil products which formed the bulk of its consumption, while she exported during the same period oil products to the value of 428,564,000 krans to the world markets.

It is indeed most disappointing to learn that a very small percentage of Persian oil is consumed in the country and that Persia has to depend for the bulk of her supply on foreign countries. The reason is that the lack of modern transport renders prohibitive the cost of sending the refined products into the interior of the country. For example, it has been found that it would be cheaper to supply Tehran with Russian oil than it would to transport kerosene or petrol from Abadan anywhere beyond Shiraz or Isfahan.

Here is to be found the reason why Persia remains in such a backward economic position and cannot make any use of her own resources. Persia is like a hungry person who has plenty of food in another part of his house but is unable to partake of it because of his physical inability to walk.

To-day Persian oil is being sold in most parts of Europe, Asia and Africa, large steamships on the world's ocean paths are burning Persian fuel oil, millions of motor cars are using Persian petrol, thousands of aeroplanes fly under the power of Persian motor spirit, and yet Persia has to import the petroleum products needed for her own consumption !

As long as modern transport is not introduced in Persia, the conditions are bound to remain the same ; but, after railways and other systems of transport are started, it is certain that oil will play a very important rôle in the industrial life of the country.

## CHAPTER VI

### MANUFACTURED ARTICLES AND MODERN INDUSTRY

BROADLY speaking, factories, as the term is understood and used in the western world, do not exist in Persia, save in the oil industry ; and the multiplication and at the same time the economy of labour obtained by the employment of steam-power, or even of water-power, are hardly known. Industry, as far as it exists, is local, not national, the various craftsmen transfer their knowledge to apprentices from one generation to another. These craftsmen manufacture goods for their livelihood, but many of them develop remarkable skill in handicraft, and show an intuitive love of beauty and achievement. The trade is greatly localised, because of the cheapness in the particular neighbourhood of the primary substance, and the traditional craftsmanship which generally remains in one district ; in consequence every town or district can boast its speciality.

Of the textile fabrics the most important and best known are the carpets, which are famous all over the world. They are entirely hand-made, and, among the nomad tribes, are invariably made by women. The men receive the orders, buy the wool and get it dyed according to pattern ; the women and children do the work, four or five being employed upon a carpet of ordinary size. The time involved in manufacturing these carpets is responsible for their high cost. A woman working at a piece two feet wide can finish one line of stitches in half an hour. If the carpet is to be of moderate quality there must be ten lines of stitches to the inch, that is to say, she finishes a piece of carpet two feet wide by one inch in length in five hours ; in other words a square foot in

thirty hours. The varieties are considerable, and are marked by the strongest individual characteristics, so that it is impossible to mistake the products of different provinces or districts. The principal manufacturing districts are Sultana-bad, Khorasan, Kurdistan, Kashan, Yazd, Kirman, Fars, and on a smaller scale all over Persia among the nomads.

The introduction of aniline dyes, though strictly prohibited by the Government, has had a deplorable effect on the carpet industry, and the necessity of rapid production and of competition with the cheaper fabrics has greatly reduced the individuality of design, and has led to the monotonous reproduction of established patterns. Among the ancient carpets the most beautiful ones were those made of silk. These can still be obtained to order ; but the prices are high.

On the other hand, the carpet industry has gained a new impetus during the last twenty years owing to the increased trade communication between Persia and Europe, which has increased the demand as well as the supply of the carpets. For some time past European and American firms have established themselves in Sultanabad and Kirman and are now exporting the bulk of Persian carpets. These firms do not superintend factories, but encourage the production by supplying the wool, the dye and the patterns and receive the work when finished. In 1922-23 the total export of carpets amounted to 92,864,000 krans.

Up to 13 years ago the export of carpets containing aniline dyes was prohibited, but since then it has been permitted under an export duty of 12 per cent. ad valorem, and everything is being done to discourage the use of aniline dyes.

In addition to the woollen carpets, there are also manufactured wonderful soft felts called namads of almost any size or shape, mostly at Yazd, Kirman and Isfahan. They are not exported by reason of their great bulk and weight and their manufacture has been for the most part replaced by woollen carpets. There are also many different kinds of cotton carpets made, which are used by the poorer classes ; when exported to Europe these are used for curtains and hangings.

Next to carpets are the woollen fabrics which produce the beautiful shawls of Kirman, and the silk industry which is centred in Yazd, Kashan and Khorasan. These industries were very prosperous once, but the introduction of cheaper goods from Europe has practically ruined them. Of silk fabrics, about £150,000 worth per annum is exported to Turkey, Russia and India; and recent legislation which provides that all Government officials should wear home-made clothes has revived the woollen industry to some extent. Coarse cotton stuffs are manufactured in all districts but not exported, and a finer quality is now manufactured to supply the needs of the army. At Isfahan, Qalamkars, or chintzes block-printed on cotton or silk tissues, are made which are commonly used for curtains and some are exported to Europe. The richer tissues, such as velvet and brocade, which were made in Persia almost before they were known in Europe, have been greatly reduced in amount.

Metal-work has been one of the most renowned of Persian industries in the past and still exists in some parts on a reduced scale. The enamelling in gold, silver or copper is the best surviving relic, being still practised at Shiraz and Isfahan. At Zanzan, Burujird, Isfahan and Shiraz the work in the precious metals is carried on; and at Abadeh and Shiraz is executed a very ingenious and artistic mosaic work of bone, metal and coloured woods arranged in minute geometrical designs, called "Khatem." Persian ingenuity has always excelled in carving and at Abadeh carved spoons and boxes in high relief on the surface are a notable production. The Persian tanning industry is at Hamadan where most of the skins intended for export are treated as well as a large quantity of leather made which is used in making shoes. In the environs of Kashan and Fars much rose-water is made, and a considerable quantity of it is exported to India and Java.

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Many attempts have been made to start manufactures supported by foreign capital and conducted by foreigners, but nearly all have resulted in loss. In 1879 the Persian Government was induced to spend £30,000 on the erection

of a gas factory in Tehran ; but work was soon stopped for want of capital. A few years later a Persian bought the factory and plant for £10,000, and made them over in 1891 to the *Compagnie Générale pour l'Eclairage et le Chauffage en Perse* ; which, after bringing out much additional machinery for the plant, and wasting much capital in trying for some years in vain to make gas that was good and cheap, closed the factory because of the impossibility of getting coal at a reasonable price. In 1891 another Belgian Company, the *Société Anonyme des Verreries Nationales de Perse*, opened a glass factory in Tehran ; but the difficulty of obtaining the raw material cheaply and in large enough quantity was too great to make it a paying concern, and the factory was closed. A third Belgian Company, the *Société Anonyme pour la Fabrication du Sucre en Perse*, with a large capital, then came to Persia and began making beet sugar in the winter of 1895. As this industry, if developed, would have meant a great loss to the Russian sugar industry, the Russian Government encouraged the import of sugar into Persia at a very much reduced price. Consequently the product of this new concern could not compete with the cheap Russian sugar and it ceased its operations in 1899. If Persia could have protected this infant industry by a protective tariff on sugar it could have established itself, but unfortunately her hands were tied with tariff treaties of a most oppressive nature. In 1890 a Russian Company started a match factory near Tehran, with an initial outlay, it is said, of about £20,000 ; but it could not successfully compete with Austrian and Swedish matches, and ceased operations very soon. A Persian gentleman erected a cotton-spinning factory at Tehran in 1894, with expensive machinery ; it turned out some excellent yarns but could not compete in price with the imported article.

The reason for the failure of these enterprises has been essentially lack of knowledge of the country on the part of the disappointed promoters. Nearly all have built their factories where the raw material needed for that particular industry was not available. Take for example the Belgian Company which started the beet sugar factory near

Tehran. Round Tehran beets are not planted on a large scale because the soil is not so good for that purpose as that of Khorasan in the northeast or of Luristan in the southwest. The factory had to remain idle for a good part of the year, or bring beet from other provinces, paying a high cost of transportation.

The same reason applied to the other industries mentioned. But there were two other most important factors which contributed to the downfall of these enterprises.

The first and, in my opinion it is the most important, is the lack of modern transportation in the country. Persia imports practically all of its sugar from Russia for its northern provinces and from France and India for its southern provinces. It cannot obtain all its sugar from one country. Before the War, Russia made every effort to extend her export of sugar and other materials that Persia needed to the southern parts of Persia. But this was physically impossible. Sugar coming from Russia to Shiraz, a city in the south of Persia, costs a great deal more than that from India. In the former case the distance that the caravan has to go is about 600 miles, whereas in the latter it is only about 100. Persian provinces, as long as Persia has no modern transportation, must import the articles they need from the country which is nearest or most accessible to them. So if a sugar factory established in Tehran wants to supply only the surrounding provinces—as it cannot compete in price with the sugar imported in distant provinces through their own borders—it can produce only a certain limited amount every year. This limited production, on such a small scale, not only does not bring enough profit, but in most cases means an actual loss to the factory owner.

The second reason is that Persia has had no legal rights over her own tariffs in the past; that right having been taken from her by force by Russia and other countries. A free trade system has been imposed on her from without, and the “most favoured nation” clause has accomplished the rest for other powers. I shall take up this question somewhat in detail in another section, and simply mention

here that, as Persia had not a free choice in the revision of her tariffs, many modern industries that could be developed have not been started.

The removal of these factors and conditions which have contributed to the non-development of modern industry in Persia would result in the improvement of the industrial condition of the country in a few decades.

Persia, and the countries which are in the same position as Persia, have reached the limit of their economic dependence. The era of industrial revolution is coming to Asiatic countries, and unless proper measures are taken for the development of modern industries, there will result the same conditions as existed in Europe in the 18th and 19th centuries.

All these Asiatic countries produced all that they needed a hundred years ago. With the opening up of commerce with European countries all their former methods of production have proved to be inferior, and competition with machine-made goods has driven the indigenous industries out of the market. The indigenous industries have been killed in the last hundred years in these countries, and at present are absolutely dead. What Persia at present produces is raw material, but the amount of raw material that she can export is not sufficient to cover the amount of imports from other countries. So, naturally, the country has every year a deficit of exports, and that means that she is losing her capital. In other words, she is economically bankrupt in the sense of production. So Persia, as well as other countries which are in the same position, has to find some other means of production and consumption. She has to save more, to produce more, and to consume less. Industrial revolution and machine production are the only means by which she can produce more, modern machinery being the first prime factor. Whether she is willing or unwilling, chimneys and smoke will have to fill up towns and villages, and this is sure to happen in Persia in the next twenty or thirty years.

There are some countries that have built up wonderful industrial systems but have not had enough raw material.

America is practically the only nation that has at present enough raw material for the majority of her industries. Persia has vast natural resources, and also large fields for the production of raw material. Persia has plenty of coal and iron, copper, lead, nickel, asbestos, gold, silver, mercury and manganese which can be utilised in a short time for the establishment of modern industries. On the other hand she has a large variety of raw material, whose production, if increased, will be the best means of supplying these industries.

Even agricultural production, by means of which raw material is produced, has been so revolutionised at present in western countries that if it were not for the limited cultivable lands in the western world, and cheap labour conditions in countries like Persia, the Asiatic countries could not compete even in the production of raw material, and would disappear as economic units of the world.

This may still be within the range of possibility. But it would take a very long time. The influence of western civilization, with its purely materialistic aspect, is sweeping over Asia at the present moment. The desire to produce and thereby to live is so paramount that these countries must start—and they are starting—their machine-made industries as rapidly as their economic position permits.

Persia can, in the future, be an industrial country, because she is endowed with a vast supply of coal, iron and petroleum. Water-power for the generation of electricity is also abundant in the mountainous sections of the country, and only needs utilization. Further, Persia's vast cultivable lands should assure her future success as an agricultural country.

Railways are the most essential thing for Persia at the present moment. By building railways Persia can, in a short period of time, increase her agricultural production, and exchange these products for imported goods. The natural resources cannot be exploited, so long as there are no railways in the country. As has already been seen, the lack of railways has caused the failure of many enterprises.

The economic effects arising out of the War have given a stimulus to the establishment of industrial undertakings in Persia. There is already a spinning-factory working in Tabriz, and another in Isfahan, while the one at Tehran is to be repaired and put into operation very soon. A match-factory has also been started in Tabriz and in most of the large cities there are power houses for supplying electricity.

## CHAPTER VII

### COMMUNICATIONS

#### POST

BEFORE the year 1851 there were no post offices in Persia, and there existed a service of rudimentary character which consisted of private couriers who carried letters and parcels from one part of the country to the other. In 1851 a postal system was inaugurated which was "farmed out" to an official who employed a number of agents for the conveyance of letters and parcels at arbitrary prices.

In 1874 an official of the Austrian Post Office was entrusted with the organization of the Persian Post upon European lines. Within a year of his appointment he had instituted a regular riding post between Tehran, Tabriz and Julfa, with a branch from Qazvin to Rasht. This system was later extended to other cities and was connected with the Russian and Indian services. The Government spent at that time a considerable sum for the maintenance of this service ; and later on, when the experiment proved successful and the people began to realize the benefits of a postal system, the service was again farmed out to different individuals who paid a fixed sum every year to the Government. In 1877 Persia joined the Universal Postal Union.

The "farming out" system was abolished in 1901 and in the following year the Post Office was amalgamated with the Customs Department worked by Belgian officials. The present postal system of Persia was introduced by the Belgian officials and in 1906 the postal administration was made part of the Ministry of Posts and Telegraphs. Postal regulations were soon issued by which private individuals were forbidden to engage in letter-carrying, and uniform rates of postage were fixed for all places within the country. The Postal Administration was granted the monopoly for regular

passenger services throughout the country, and it has established a Government system of transport for carrying the mails as well as the passengers. The mail between most of the large cities is conveyed by motor cars or waggons and in small districts on horseback.

The growth of Persia's postal business may be seen from the fact that in 1844-5 there were conveyed 1,370,885 letters and post-cards, 7,455 samples, and 173,995 parcels. At present there are 221 Post Offices in the country, the total length of postal routes is 11,640 miles ; the total distance covered by the postal service every year is 2,826,200 miles ; the number of letters and post-cards annually carried is 4,815,238 ; of samples 91,609 ; and of parcels 569,673.

#### TELEGRAPHS

The first electric telegraph built in Persia was a short line from the Royal palace to another place in Tehran. In 1859 a line from Tehran to Sultaniah was built by the Government and in 1863 it was extended to Julfa on the Russian frontier. In the same year a telegraphic convention was concluded between the Persian and British Governments for establishing direct telegraphic communication between England and India by connecting the European and Indian systems by a land line through Persia. This convention was followed by others which resulted in the construction of other lines throughout Persia which are at present operated by a foreign staff. These lines will eventually become the property of the Persian Government.

At present the Persian Government possesses 13,612 miles of telegraph lines and 143 telegraph stations ; and the capital is now in telegraphic communication with practically every city in the country. Morse instruments are everywhere in use throughout Persian circuits. The number of messages sent annually by these lines is 1,027,148. Persia joined the Universal Telegraph Union in 1869. The Persian Government lines were farmed out previously, but since the Constitution the administration of telegraph lines, like that of the Posts, has been entrusted to the Ministry of Posts and Telegraphs.

## TELEPHONES

The telephone system in Persia is organized by a Persian company which holds an exclusive concession from the Government to establish telephones all over Persia, excepting the province of Gilan.

This company has established a telephone service in all the large cities as well as a system of long distance telephone between some of the larger cities. The present telephone service in Persia is on the Ericsson system.

The telephone company was reorganized in 1920 and its capital has been considerably increased. It has employed a number of German experts who are now engaged in introducing the modern telephone system of underground wires and central electric station in Tehran. This system will be extended to other cities in the course of time, and the company expects to increase its facilities for telephone communication between all the districts and villages in the course of a few years.

## ROADS

Persia possesses at present about 1500 miles of roads which can be used for motor-transport, and there are many natural roads connecting the large cities which could easily be reconstructed and used for this purpose.

The bulk of commercial goods is transported on pack animals, and the high cost of such a primitive system of transport is responsible for the undeveloped resources as well as the meagre trade of the country. There is at present an Italian company which has a regular motor transport service between Tehran and Enzeli; and a French company has established a similar service between Tehran and Baghdad which is linked with the Overland route to Beirout. Moreover, there are many other Persians who have motor and lorry services which transport passengers as well as goods. A German Aeroplane company has just established an aeroplane service between Baku-Tehran, but it is doubtful whether it will be able to extend its service to other parts of the country.

There is a project before the Government for the construction of roads throughout Persia and the repair of the existing ones which would involve a total expenditure of over £5,000,000. It is hoped that this project will be approved and the necessary sums provided for this very important and vital question. In the case of a railless country like Persia it is most vital to have good roads for developing the motor transport service, which is becoming very popular in the country.

#### RAILWAYS

Many attempts have been made in the past to introduce railways in Persia. These attempts have failed either because of lack of sufficient capital or because of certain political jealousies and rivalries. A short review of these attempts will prove that the question of Persian railways has been impeded by a good deal of political conspiracies.

Between 1865 and 1871 French, German, American and English syndicates were successively authorized by the Persian Government to proceed with the construction of railways. All these concessionaires lacked sufficient capital and could not procure it because of political obstacles placed in their way. In 1872 the Reuter concession was granted, which conferred a monopoly on the company for railway construction throughout Persia for a period of seventy years. Included in this monopoly was the immediate construction of a railway line from the Caspian Sea to the Persian Gulf. This concession was, however, cancelled in consequence of the protests lodged by the Russian Government.

In 1774 a Russian engineer named General Van Falekenhagen tried to obtain a railway concession from Julfa to Tabriz and was strongly backed by the Russian Government. This scheme failed because the desired capital could not be procured. In 1878 a Frenchman obtained a concession for a railway line from Resht to Tehran, but failed to realize his project because of the refusal of the Persian Government to guarantee the payment of the interest promised on the capital. A Belgian concession for a similar line experienced the fate of previous ones.

Tsarist Russia opposed any railways in Persia except those especially aligned to suit Russian commercial or strategical needs, i.e., railways running from the Russian frontier, either in Azarbaijan or in Khorasan, or from the Caspian to Tehran.

In 1888, when the British Minister at Tehran obtained from the Shah the concession for opening up the Karun River for navigation, his Russian colleague received instructions from his Government to apply pressure at Tehran; the result of his combined threats and persuasions was the signature of the following document :—

A SECRET CONVENTION, NOVEMBER 10, 1890.

For a period of ten years beginning from the date of the signature of this convention, the Persian Government engages neither to construct a railway in Persia, nor permit others to do so, and will not grant any concession for the construction of railways in Persia to any one.

After the expiration of the period of ten years, the contracting parties will discuss the prolongation or renewal of the contract.

By "Railway" is to be understood, any railroad upon which steam or other motive power is used, and all railways in Persia are included in this convention. Tramways with motive power of horses, and in towns and their environs, are not included in this convention; neither is the railway from Tehran to Shemiran, where the summer residence of H.M. the Shah is situated, a distance of two farsakhs.

(This convention of 1890 was subsequently renewed till 1905.)

Owing to the above mentioned secret convention, other attempts to build railways in Persia from 1890 to 1905 came to nothing. The events of 1906 and the Persian Revolution further delayed this question till 1912.

On February 6, 1913, the Persian Foreign Minister signed a concession to the Russian Julfa-Tabriz and Enzeli-Tehran Road Companies, giving the right to construct a railway from Julfa to Tabriz (93 miles), with an extension to Lake Urumiah. The work of construction was expedited, owing

to the subsequent demands of transport occasioned by the war, and the line opened early in 1915. By the terms of the Russo-Persian treaty of 1921, this line was transferred to the Persian Government and is at present administered by them.

In the same year 1913 an agreement was reached between the Persian Government and the representative of a British syndicate, for the construction of a railway from Mohammerah to Khurramabad in the interior. The syndicate was granted a two years' option, during which period the route of the line was to be surveyed. The Persian Government undertook to decide, on the completion of the survey, whether it would build the railway as a State line under contract with the syndicate, or whether it would grant the syndicate a concession for the construction of the line.

Prior to the war an international syndicate of French, British and Russian financiers interested itself in a trans-Persian line which was to begin from Astara on the Caspian Sea and run to the Persian Gulf via Tehran, Yazd and Kirman ; but the War and its consequent results caused the the promoters to abandon their project.

In 1920 the Persian Government granted a further right of option to the British syndicate called the " Persian Railways Syndicate " for the construction of a railway from Khanaqin on the Iraq frontier to Tehran, with a branch to Enzeli on the Caspian Sea. The syndicate undertook to begin a survey of this line at once and to submit its report to the Persian Government ; after which the latter would decide whether the line would be built as a State line under contract or would grant the syndicate a concession for its construction. According to the latest information available, this syndicate has submitted the report of this survey as well as that of the Mohammerah-Khurramabad survey and it only awaits the decision of the Persian Government.

Before the War the Indian railway system was fully developed to Baluchistan, close to the Persian frontier. A broad gauge line running through Quetta to Nushki was constructed ; during the War this line was extended to

Mirjawa on the Persian frontier and thence to Duzdab, a distance of about 52 miles.

In addition the Russian system both on the Caucasus, as well as on the trans-Caspian side, is well developed to the Persian frontier ; on the west the Iraq lines go as far as Khanaqin.

In the case of a country like Persia where there are no railways and modern methods of communication are yet to be started, other factors have also to be taken into consideration. The three most important factors with regard to Persian railways are economic, strategic and political. The economic aspects are, of course, those under discussion, but it would be out of place if one were to neglect entirely the other two aspects, because after all they may do much to influence the economic necessities of a nation.

The strategic aspects of Persian railways are those connected with the present differences of nations which always cause conflicts and wars. As long as human nature is as we see it to-day, and as long as wars continue to exist and the powerful to oppress the weak, so long Persia must build her railways in such a manner as to provide as far as possible for all eventualities. In other words, Persia must before everything else extend her railway system to one of her southern ports so that she may have access to the open sea. This is a point on which the Persians are unanimous, especially after their recent (1922) experiences with the Soviet Government of Russia over the question of transit for Persian goods through Russia. This same problem would arise in the event of future disagreements with Turkey, Iraq and Syria if Persia is deprived of transit rights through these countries to the Mediterranean Sea.

As regards the political aspects, the constant difficulties of the Persian Government in connection with the different tribes of the country and the heterogeneous character of the different provinces—a state of affairs similar to that prevailing in other countries previous to the building of railways—must be borne in mind. Owing to these reasons, care must be taken to arrange for the construction of railways in such a manner as to provide for the political homogeneity

of the country and to establish inter-communication between all parts of Persia. The economic question, however, remains our most important topic.

The ideal line, and the one which follows the natural course of trade, is one which should run from west to east. Persia produces, at present, raw material and agricultural products ; in return, she needs the manufactured articles of Europe. Russia and India produce very nearly the same kind of products and naturally would not constitute advantageous customers for Persia. It is true that the sub-tropical products of the Caspian shore will find a ready market in the more temperate regions of colder Russia ; but the bulk of the agricultural products of Persia come from the high plateau and are nearly the same as those produced in Russia.

The natural course of trade in manufactured products is chiefly in the west and east direction, extending and radiating from that small and restricted longitudinal belt covering the north-western portion of the United States, England, France, Belgium and Germany. These manufactured articles are usually given in exchange for the surplus stores of food-stuffs and raw material to make up the deficiency caused by the exigencies of manufacturing conditions and thickly concentrated populations.

Persia in the past has pursued a very unnatural trade-route, which has resulted in her exporting practically no food-stuffs and very little raw material, both of which she could have produced in great quantities and which have not been done owing to the lack of transport. Russia has been the greatest importer of Persian raw material in the past and this has been due to the proximity of the two countries and the better means of transport existing in Northern Persia. The Russian demand for such raw material and foodstuffs produced in Persia was limited and the Persian producer was forced to limit his production to the Russian demand. The reason why there was no other customer besides Russia was that when the transport charges in Persia were added to the cost of such commodities they could not compete with American wheat or Indian cotton in the markets of western

Europe. Under these circumstances the best customer was Russia which produced the same food products as Persia and was therefore not in need of imports from the latter, and merely bought a limited amount of raw material at any price she wanted. Such conditions were responsible for the limitation of production, and when analysed rested on the problem of transport which made Persia dependent on her Russian customers.

To the European countries Persia exported mostly what are called industrial plants such as opium, tobacco, cocoon, etc. Their comparatively small weight in proportion to their value compensated for the heavy transport charges in Persia and made their export profitable. The production of such articles, however, involves a great deal of capital outlay and this was not possible for Persia which lacked capital as well as men.

The economic life of a country can be very easily adjusted if its means of communication are properly and scientifically arranged. The present trade routes of Persia are adapted to the present production and the present system of transport. If the latter is improved the whole production in Persia will be revolutionized, and the natural trade routes will be followed. For many years to come, the country is bound to remain predominantly agricultural and if proper outlets are arranged for the export trade larger quantities of foodstuffs and raw material can be produced and sent to the industrial countries. Cheap communications would enable the Persian products to compete with similar products in Europe and elsewhere, and would, in addition, reduce the present dependence of Persian goods on the Russian market.

A line running from a point in the middle-western part of Persia to Tehran and thence to eastern Persia is the best line to build for the purpose of reorganizing the economic life of Persia. Such a line would pass through the central plateau, touch the grain-producing zones of the west; and, if connected with the Baghdad Railway when that is completed, would bring Persia into close contact with the Mediterranean. From an economic point of view, and assuming that transit is allowed to Persia in Iraq and Syria, this line would form the

trunk line of the Persian railway system. Azarbaijan, which is the north-western province and the richest in the country, would be joined to this line by extending the Tabriz line a hundred miles to the south. This extension would connect Persia with the Russian Caucasian lines, while in the eastern part of the country the rich provinces of Khorasan and Sistan, and even parts of Turkistan, Afghanistan and western China could find a shorter route to Europe through Persia. The Mohammerah-Burujird line could also be extended to connect with this trunk line, and other lines to the south and east could be constructed in future to suit the economic demands of the country.

This line, in my opinion, is the one to be built ; but there are certain financial difficulties connected with its eastern section which would more than counterbalance the economic advantages mentioned. Furthermore, this line would only pay when it is connected with the Mediterranean, so as to avoid the long sea route via the Persian Gulf, the Red Sea and the Suez Canal. There is always the possibility that Iraq or Turkey might impose certain restrictions on the transport of such goods which would compete with similar ones produced in those countries, but such a short-sighted policy would at the same time bring them considerable loss as far as it concerns traffic on their lines.

There are some who advocate a line from Trebizond on the Black Sea to Tabriz, Astara and Tehran. The disadvantage of this line lies in the fact that it connects Persia with the Black Sea and not the Mediterranean, which is a better and more accessible route to Europe ; further, it is based on the assumption that Turkey is prepared to build a line from Trebizond to the Persian frontier.

Most Persians are apt to over-estimate the economic value of the Caspian provinces and claim that these should be developed in the first place, because the physical nature of the locality is more favourable. There are many people who advocate the construction of a line from the Caspian Sea to the Persian Gulf and believe that such a line would bring these rich regions within close range of the open sea. The argument against this is that the Caspian provinces do not

constitute all the fertile parts of Persia and proper provision for their exports could be made in their case by constructing a line from Astara to Tabriz, or by building another branch line from Astrabad to join the trunk line when its eastern section is completed.

The present difficulties of the Persian trade are discussed in another chapter, and propositions for favouring one line instead of another are the result of the present difficulties. These may not exist a few years hence, or may be transferred from one part of the country to another. The question must be looked at in a broader way ; if this is done, the consensus of opinion will be that the trunk line of Persia must run from west to east and not from north to south.

The reason why I have gone somewhat into details is because Persia must either have railways at once or disappear from an economic point of view. The conditions are getting hopeless and the only remedy on which all are agreed is the introduction of modern transport. Railway construction is bound to be started soon and the above details may serve to explain the economic needs of the country. This proposal to construct a line from the west to east is, however, a theoretical one and would be suitable to a country which has the means to finance railway construction. The position is quite different in Persia, and the practical possibilities are to be studied and worked for. If Persia is to have railways we must find out which line is the most practical one and start the construction of that line at once.

The dominating question with regard to railways is the financial one. Railway construction is not always a profitable undertaking and needs, at the outset at any rate, a good deal of sacrifice on the part of the country which is anxious to have modern transport. Persian railways can be built (a) by the State from the proceeds of Government bonds based on sound securities, (b) by private capital and subsidized by the Government with a guarantee of interest by the Government, (c) privately owned lines granted liberal concessions from the Government as to rights and wayleaves over lands through which the line has to pass.

As to the first project, much can be said to discredit it in the case of Persia as she is at present. Any railway line built by the State is bound to cost a great deal because very few Government undertakings have proved to be economical or efficient. The second is the one which was adopted in India and other countries and has proved to be quite successful. The land must be given free and there must be a guaranteed interest on the capital, with the provision that the profits should be divided with the Government if they exceed the guaranteed interest. The Government could reserve the right to buy out the lines within a specified time, and as they provide the guarantee the control of the lines could be kept in their hands. There is no doubt that the cost of maintenance would form a very large item and there might be a deficit for many years to come. The terms should obviously be made attractive to foreign capitalists.

The third project, that of privately owned and constructed lines, does not need serious consideration, because the risks of such enterprises and the expensive engineering works involved, together with the uncertainty as to the economic value of adjacent districts, are sufficient to convince one of the futility of such attempts.

There is practically no difference between the first and second projects so far as present conditions of the country are concerned. In both cases, the Government would have to guarantee the interest and invite the foreign investor to lend, because there would be a deficit in any case ; on the other hand, private companies would build and operate the lines with greater economy and efficiency.

Assuming now that one of the first two methods is adopted, let us see how it would be possible for the Government to pay the guaranteed interest. Sani-ed-Dowleh, one of the late Cabinet ministers of Persia, was of opinion that a special tax could be levied on sugar (which is widely consumed by all classes of people) to meet this interest, and this opinion is now widely held in the country. This might prove a feasible proposition, but money raised by taxation of this sort is also wanted for other essential public works, such as irrigation, sanitation, etc. To get all these works under way, loans

are to be raised and the interest on them paid as well. In a country so poor as Persia where it is always difficult to raise the taxation to meet the borrowings, and the balancing of the budget is an ever-present question, such proposals might not prove very practicable and above all the tax-paying ability of the people must be raised.

The very close connection between the finances of the country and the introduction of such public works have constituted a vicious circle the solution of which has taxed the minds of many careful thinkers and observers. Consequently, the only logical conclusion to come to is that the first railway to be built should be the one likely to prove the most practicable.

A careful survey of the economic possibilities in the province of Khuzistan, such as cotton plantation on a large scale, and the bringing into use of vast fertile regions in the south-west, shows that that region might play a considerable part in the raising of the desired sums. There are also other easy means of obtaining money, provided the Persian Government are prepared to consider reasonable projects, but the essential thing to bear in mind is the existence of the vicious circle referred to above, and in order to escape from it Persia must be prepared to make certain sacrifices.

The Mohammerah-Tehran line via Khurramabad, Burujird, Sultanabad and Qum is the most practical line which can be thought of at present. It should be possible to interest foreign capitalists in this line, and consequently it is the first line which should be considered.

The Duzdab line, if extended to Nusratabad, a distance of about 130 miles, should prove successful, owing to the large amount of traffic which it would carry; there are said to be certain projects under consideration by the Government for the construction of such a line and for its ultimate extension to Meshhed which might prove both practicable and profitable.

## CHAPTER VIII

### FINANCE AND BANKING

#### FINANCE

To understand the present finances of Persia it will be necessary to explain the system of taxation that existed at the beginning of this century and its subsequent reforms.

Prior to the Constitutional régime of 1906, the principal revenue of Persia could be divided into two headings: the fixed revenue and the irregular revenue. Under the fixed revenue could be classed the regular taxation, income from the State Domains, rents and leases and Customs; while the irregular revenue consisted of public requisitions, presents, and such other items as fines and confiscations.

Regular taxation consisted of the land tax, tax on animals, flocks and herds, and taxes on shopkeepers and craftsmen. The basis of land taxation was the tithe, or ten per cent. of the produce. The land tax was collected in cash and in kind; that is to say, the Government received part of its taxes in form of wheat, barley, rice, straw, etc. The application and collection of the land tax differed in various districts and, as the assessment was not regular and universal, there were many injustices in the methods of collection.

The tax on animals and herds was levied mostly on the tribes and in some cases it was supplementary to the land tax. The tax on shopkeepers and craftsmen was in the form of a guild tax. The tradesmen, craftsmen and shopkeepers in every district were grouped together under the heading of their special calling and were required to pay a fixed tax varying with every trade.

The income from the State Domains was in the form of a rent paid by the cultivators to the State which was

determined by the relative contribution of each party towards the expenses of cultivation.

Under rents and leases were included the proceeds from concessions and monopolies owned or leased by the Government, such as the Posts and Telegraphs, the Mint, mines, etc.

The Customs duties in each province were farmed out to the highest bidder. There was no regular system of collection at the frontier; in consequence, customs duties were often collected partly at the frontier and partly in towns and districts. The farmers in each district competed with their neighbours in other districts by reducing the tariff and so attracting more trade to their district. In 1899 the customs were re-organized by Belgian officials on European lines and the old system was abolished altogether.

The irregular revenue consisted of imposts arbitrarily and suddenly levied to meet a temporary exigency and some of them became regular revenues in course of time. Among these were included public requisitions levied to meet such expenses as the cost of wars, the receiving of foreign representatives, the construction of roads and royal palaces, the travelling expenses of the sovereign, etc. Presents were generally made to the Crown on festivals, or on occasions of receiving appointments from the sovereign; fines and confiscations were imposed on officials of the Government, Chieftains and rebels for misdemeanours of any kind.

Under the heading of expenditure were the upkeep of the Army and the Foreign Office, payments to revenue collectors, allowances to princes of the Royal House, the sovereign's civil list, pensions and annuities. The last item included regular annual payments to numerous persons who may be described as parasites, since they rendered no service to the State, yet drew large sums of money.

Until 1888 the yearly expenditure was less than the annual revenue, but subsequently the revenues decreased and many payments fell in arrear, which had to be met by loans.

For the purpose of collecting the revenue, Persia was divided into taxation districts each under a Governor who was responsible for the collection of the revenues. He was

assisted in this task by an accountant who kept the records, knew the amount to be paid by every individual or locality, issued the receipts and generally supervised the collection of taxes. In the capital there was a Minister of Finance who had under him a number of accountants, each of whom was in charge of the accounts of one district or province. The Governor of each province was responsible to the Minister of Finance, in so far as it concerned his duties, as a tax collector.

The abuses of such a primitive system of taxation, with its unjust incidence and its vicious operation, is quite obvious and need not be emphasized here.

Since the Constitution there has been a steady evolution in the finances of Persia, and the revenue system of the country has undergone considerable changes.

Soon after the Constitution a Ministry of Finance was set up for the purpose of organizing the finances of the country. The same old accountants were employed to carry on the work until the whole system of taxation could be revised. In 1910 the Persian Government invited a number of Americans to re-organize its finances. Their period of employment was quite short, but some important steps were taken by them towards much needed reforms. One of the first acts of this mission was to introduce a system of centralization in the revenues and expenditure by establishing a Treasury General.

This American mission was succeeded by a Belgian Mission which introduced a modern system of accounting, collected a good deal of information regarding possible sources of taxation, and above all educated a number of young officials to replace the old accountants. The Belgian officials left in 1915 when the administration reverted to Persians. An Act was then passed by the Majlis explaining in detail the constitution of the Ministry of Finance, and a number of indirect taxes were approved and enforced. In 1920 a British mission headed by a very able man was invited to Persia to re-organize the finances; but owing to certain political reasons he was not able to proceed with his work; there are many Persians now who realize the value of his

period of short but very useful service and much regret his departure. In 1922 a second American Mission was invited to proceed to Persia and continue the work of reforming the Persian finances. This mission has been in Persia for the last three years and has done much useful work in this direction.

The actual condition of the finances of Persia is briefly as follows :—

The principal tax in Persia to-day, as before, is the land tax. It consists of a tithe of the produce of the land, which is payable in cash or kind. At the present time it has ceased to be just in its incidence, owing to the long period which has elapsed since the last revision. The present revenue derived from this source bears no relation to the real taxable capacity of the country. There are many villages which have grown up since the last revision (over half a century ago) and many which have decreased in prosperity. A special law for the revision of this tax is now before the Majlis which provides for periodical assessments; when approved, this should greatly improve the character of this tax, its method of collection and its incidence.

Next to this, come the State Domains which are now under the direct control and supervision of the Government. They would prove very productive if expert knowledge were provided for their administration.

The chief indirect taxes are the opium and tobacco excise, the tax on wines and spirits and the Customs. The revenue from the above is not what it should be, for its collection involves a good deal of expenditure as well as time.

The Customs are the best administered department of the revenue. At present the staffs at the frontier ports are inadequate, but if they were increased the revenues would be greatly benefited.

There are many other indirect taxes in use which are not properly and universally collected but yield a certain amount of revenue. The costly methods of collection and the utterly inadequate control make these taxes less remunerative than they should be, but by devising better methods

of collection it is believed that they would yield nearly double what they now give.

The other sources of revenue are the Posts and Telegraphs which are revenue-producing administrations ; tolls collected on roads, royalties derived from concessions such as that of the Anglo-Persian Oil Company, the Imperial Bank of Persia, etc., mines, passports and chancellerie, etc.

The total revenue of Persia during 1923-24 amounted to nearly 230,50,529 krans (about £5,768,763), while the expenditure was 233,118,636 krans (about £5,827,944). At present the budget nearly balances, but there is a great deal of need felt for increasing the appropriations for medical help, education, public works and improved communications.

The security and order established during recent years and the increased authority of the Central Government, coupled with the strict control of revenue and expenditure introduced by the American Financial Mission have greatly helped towards improving the finances and the collection of revenues. There is ample evidence to prove that the resources of Persia are sufficient to provide an adequate revenue for its present requirements. It only needs readjustment of the financial administration, revision of a number of old taxes, and the introduction of new taxes to be levied on the richer classes. The finances of Persia have greatly improved during the last twenty years, but they still need many reforms.

The Persian external debt is also of interest in as much as Persia is one of the few countries in the world whose external debt at present is so small that it can be regarded as insignificant.

At the outbreak of war the Persian National debt consisted of three loans from Russian and two from British creditors. The loans from Russian creditors were annulled by the provisions of the Perso-Russian treaty of 1921.

In September, 1924, the total external debt of Persia was £1,770,527. 4.3., secured on the Customs receipts, and the service of the loans has been maintained regularly and promptly. Besides this, the Ministry of Finance has a

floating debt which represents the sums borrowed from year to year from the bank for certain payments which are repaid out of revenues. The total of these is over £1,000,000.

### BANKING

The Persian monetary unit is the silver kran, consisting of 20 shahis. It weighs about 71 grains, the proportion of silver it contains being approximately 90 per cent. The silver pieces minted are 5 krans, 2 krans, 1 kran, 10 shahis, 5 shahis and 3 shahis. Nickel 2 shahi and 1 shahi pieces are also coined. The gold coins are ashrafi (10 krans), penjhezari (5 krans) and the dohezari (2 krans). The gold coin is not in circulation; it is a commodity only, and is used for presents and hoarding; it is bought and sold on the market, and its price fluctuates according to demand. Ordinarily, the gold kran is worth just twice the value of the silver kran, e.g. a 5 kran gold piece is worth 10 krans silver. The value of the kran fluctuates almost daily. In 1923-24 the average exchange value of the kran was 46.85 krans to £1.

Formerly there was a Government mint at nearly every large town in Persia. This haphazard system was a great encouragement to forgery, and there was quite a brisk manufacture of spurious coins, the Government being finally compelled to abolish the whole system. In 1877 the present currency was established on the European system; since then the Mint situated near the capital is the only place where money is coined. In order to maintain the standard in weight and fineness of Persian silver coin throughout the country, arrangements have been made recently for the re-coining of defective coins, and after a period of one year defective coins will have only their bullion value.

In 1888 a European bank, the New Oriental Banking Corporation, Ltd., established itself in Persia, and modern ideas of banking were introduced into the country. Until then banking was carried on by local money-changers and some merchants, who occasionally undertook special outside transactions. In 1889 the Government granted a concession for the formation of a State bank, with the exclusive

right of issuing bank-notes (not exceeding £800,000 without special consent of the Persian Government). With the title of the 'Imperial Bank of Persia' the bank was formed in the autumn of the same year, and has been engaged in banking business since then. Bank notes are now issued by this bank and are stamped payable only in towns of issue throughout Persia and are of the following denominations : 1, 2, 3, 5, 10, 20, 25, 50, 100 and 1000 Tomans (a Toman is equal to 10 krams).

In 1889 the Government also granted a concession to a Russian for the establishment of a 'loan bank' with exclusive rights of holding public auctions. A company was formed in the same year and started business in Tehran. After confining its business for some years to ordinary pawn-broking, which was conducted at a loss, it was taken over by the Russian State Bank, acquired large premises in Tehran, made advances to the Persian Government, and in January 1900 and March 1902 financed the loans of £2,400,000 and £1,000,000 to Persia. It had branches in some of the important cities of Persia, and made very rapid progress. This bank was handed over to Persia together with all its assets and liabilities by the Perso-Russian treaty of 1921.

Some private firms with branches in different places also do a banking business, while some European firms in large cities facilitate remittances between Europe and Persia. In recent years, the Imperial Ottoman Bank has also opened branches in Persia, and a Russian Soviet Bank has been started during the past year for facilitating trade between Russia and Persia.

There are numerous small banking-houses also in every city, which discount bills at a high rate and do a large foreign and local exchange business. They also advance money on good securities, but at a high rate of interest.

First class commercial bills are discounted in the large cities by the foreign banks at 12 per cent. per annum. The current rate of interest between merchants of good standing is 18 per cent., but where the payee is not a merchant, 24 per cent. interest is the usual rate. Small retail shopkeepers have frequently to pay up to 30 per cent. for accommodation.

Current account deposits are accepted by foreign banks but usually no interest is allowed by them on credit balances, unless the amount is large, when 1 per cent. per annum interest may be given. Fixed time deposits are allowed interest at from 3 per cent. to 4 per cent. per annum.

The raising of money by mortgage of real estate is frequently resorted to, the interest on the loan figuring under the more acceptable title of rental. This may represent an equivalent of 24 per cent. interest on the capital. Where the property is small up to 30 per cent. may be charged, while for amounts of 100,000 krans and upwards the transaction may be put through at 18, or even 12 per cent. Real estate being generally mortgaged against about 60 per cent. of its market value, as low as 9 per cent. may be charged on a loan where the amount is considerable, where occupancy is granted to the lender and where a possibility exists of the mortgage becoming forfeit through inability to redeem the estate.

The business of real estate mortgage is mostly undertaken by Persian bankers ; foreign banks mainly dealing with the discounting of bills and exchange business.

There are also many pawn-shops in the large towns which advance loans secured by the deposit of personal effects. The rate of interest on such transactions is fixed by Government regulations ; on jewellery it is 18 per cent. and on other articles 24 per cent.

There are no agricultural banks in the country to provide agricultural credit. The landlords usually advance seed and money to their villagers, repayable at the next harvest, without charge. Peasants who own oxen sometimes lend money to their poorer neighbours in which case the former usually demand from 24 to 50 per cent. profit for such accommodation as they may care to give to allotment holders or ordinary peasants. In such cases advances of barley, for instance, may be given them against a receipt for an equal quantity of wheat deliverable at the next harvest ; such transactions involve a loss to the borrower of about 75 per cent. or more.

The rate of exchange between Persia and London is governed chiefly by the course of exports and imports and the price of silver, under circumstances convenient for its import into Persia. The monetary unit being silver, any continued rise or fall in the price of silver is followed by a like movement in the kran exchange. In 1913-14 the average rate of exchange was 54.375 krans to the £1 ; in 1915 a time came when 69 krans would purchase £1 payable in London ; in 1916 it rose to 43. In March 1920, 19 krans were equal to £1 and since then it has fluctuated widely.

The foreign banks are chiefly interested in buying or selling bills of exchange and do little to finance the trade or the agricultural production of the country. The Imperial Bank of Persia is said to be making large profits in connection with the issue of notes.

The assets of the Bank Iran, the name given to the old Russian Bank, are at present about 130,000,000 krans, and its total liabilities about 11,000,000. The business of this bank is at a standstill, for the greater part of its assets is represented by sums due to it by the Persian Government and Persian creditors, who are unable, for the present, to pay.

## CHAPTER IX

### COMMERCE AND TRADE

THERE was a time when Persia was a self-supporting country, producing all that she needed and disposing of her surplus products by their export to foreign countries. With the development of foreign trade during the last century and the introduction of cheaper articles manufactured by machinery, the home industry was ruined, and to-day Persia is dependent on external sources of supply for almost all its necessities of life except food.

Before the War the principal exports of Persia consisted mainly of raw materials such as raw cotton, raw wool, fruits, opium, skins, gums, raw silks, tobacco, etc.—the only industrial product exported was carpets. The imports were practically all other things needed for an agricultural country which has to depend on foreign countries for all its requirements ; of these, the principal items were cotton goods, sugar, tea, kerosene, iron and steel goods, machinery and tools, etc.

The position does not seem to have changed much since then and the exports and imports of Persia to-day remain practically what they were before the War, with the sole exception that the export of petroleum products from Persia has greatly increased, owing to the rapid development of its oil-fields. In this brief review of trade conditions in Persia I have omitted all reference to the figures for petroleum export, as is generally done in Persia, and which in 1922-23 amounted to 154 million krans. The reason for so doing is that Persian oil-fields are worked by a foreign company under a concession, which provides for an annual payment of royalties to the Government, and the value of this trade cannot be properly included in the list of exports. It is to be admitted that this Company, in addition to the royalty, spends large sums of money in Persia for exploiting these

fields but the sums thus paid and spent are generally considered as not equal to the value of the amount exported. This idea may be a wrong one, but it is the prevalent one in Persia and is adopted in any discussions about the general trade in order to show the actual deficit of trade.

The principal countries trading with Persia before the War were Russia, Great Britain, Turkey, Germany, France, Austria, Belgium, Afghanistan, Italy, Holland, Oman and Switzerland. The Russo-Persian trade represented nearly 63 per cent. of the total trade of Persia, the Anglo-Persian trade 20 per cent., and the other countries were responsible for the rest. In fact, the trade with Russia and Great Britain covered nearly 83 per cent. of the total trade of Persia.

The Russo-Persian trade was by far the most advantageous for Persia. The value of Persian goods exported to Russia was 69 per cent. of the total Persian exports, while the Russian imports into Persia amounted to 58 per cent. of the total imports. This preponderance was due for the most part to the better developed conditions of northern and central Persia, as also the various facilities provided by Russia for its trade with Persia, such as the suppression of transit rights for Persian merchandise to pass through Russia, the exemptions allowed to Russian merchants trading with Persia, the bounties paid to Russian exporters of certain kinds of merchandise to Persia, and the very favourable tariff rates imposed by Russia on Persia for its trade.

The Anglo-Persian trade coming next presented an entirely different character because it showed an adverse balance for Persia. The British imports into Persia were valued as representing 24 per cent. of the total imports into Persia, and the value of Persian exports to Great Britain amounted to 13 per cent. of the total exports from Persia.

The reason for this was the undeveloped condition of the southern provinces of the country, which did not offer many varieties of goods for export, and the high cost of transport involved in sending up British goods into the densely populated districts of the country.

The trade routes of the country were those which run either to the North or to the South for meeting the demands

of the Russian or British trades respectively. On the whole the northern routes were better constructed, more accessible and profitable, while the southern ones lacked all these advantages and were in addition often unsafe for traffic owing to the disturbed conditions of the country.

Since the War Persian trade has undergone many changes which are mostly the result of the Russian Revolution and the trade policy adopted by its present Government.

The imports of Persia fell from 647 million krans in 1913-14 to 482 million krans in 1920-21; and exports, exclusive of petroleum, fell from 447 million krans in 1913-14 to 138 million krans in 1920-21.

After the War, Persia was confronted with numerous trade difficulties. Her best customer, Russia, was economically bankrupt, and could no more provide the same pre-war facilities for Persian trade. Persia was required to pay the greatly enhanced prices of world-commodities at a time when its own raw products which constituted its purchasing power had lost their pre-war foreign markets. Consequently less was bought and less sold, and the country was poorer and worse provided for. The result was an adverse balance of trade and the country had to make large remittances to cover this deficit.

The importers were placed in a great difficulty because there was not sufficient foreign currency to be bought. The export of silver krans was then resorted to and was followed later by the export of gold and silver articles and, in some cases, of jewellery. The Government stopped the export of these, and the result was a great drop in the import trade. The rate of exchange, which in 1920 remained under 30 krans to the £1, jumped up to 57, and even at that there was very little to be bought.

The conditions have, however, changed considerably since then and during the Persian year 1922-23 the total imports were over 619 million krans and the exports, exclusive of petroleum, advanced to 305 million krans.

The above figures still show a deficit and the question arises as to how this deficit is made up. This adverse balance of trade should not be viewed as final because if other

statistics, not included in the trade statistics, were available it would greatly modify these figures. For example, the royalties paid by the Anglo-Persian Oil Co., Ltd., to the Government and the sums spent by the same Company in Persia should properly be included in Persian exports and are generally provided in the trade figures.

During the first few years following the War a considerable change was also noticeable in the trade routes of the country. The Russo-Persian trade being at a standstill, Persia was obliged to increase her trade with other countries through the southern and western routes. In 1920-21 it was noticed that the Basrah-Baghdad-Kirmanshah trade route had replaced the Enzeli route and next to that came the Bushire-Shiraz-Isfahan, Karun river trade, Duzdab-Sistan-Meshed, and Bander Abbas-Kirman, all of which were in the south and west and indicated a complete change of the trade routes of the country. The pre-war preponderance of Russian commercial interests in Persia was also replaced by British trade, which during the past years represented nearly 60 per cent. of Persia's trade ; next to Britain came Egypt, Russia, Belgium and Holland.

The major part of the exports of Persia has ordinarily consisted of commodities produced in the northern and central provinces and exported across the northern frontiers to Russian and other markets. Until these northern routes and markets again become available to Persia few of the products of her northern and central provinces will be of any value for purposes of export, because, on account of long and costly inland transport, their value at any other frontier of Persia hardly pays the cost of carrying them to it, except in the case of a few valuable articles such as opium, carpets and silk.

Realising this, many attempts have been made to revive the Russo-Persian trade during the last few years, but all these have been unsuccessful. The reason for this is to be found in the trade policy adopted by the Russian Government which is so entirely different from others.

Lastly the Russian Soviet Government has concluded a Trade Agreement with Persia which is subject to ratification

by the Persian Parliament. The main object of this treaty is to legitimize the trade monopoly of the Soviet Government in Persia. Already the Russian Trade Department has formed a number of the so-called Russo-Persian Companies for conducting the trade between the two countries. The majority of the shares of these companies are held by the Russian Government, and the Persians are asked to participate simply to benefit the Russian Trade representatives by their knowledge of local conditions of the country. The Persian participation is limited to a number of merchants who have entered into partnership with Russia with the professed intention of exploiting their countrymen, and if possible the Russians.

The policy of these companies is just as peculiar as their composition. As Russia is practically the sole purchaser of commodities produced in northern Persia, these Companies dictate the price and their Persian partners act as advisers to show them the way for doing so and reaping large profits. For example, the Russian sugar industry being unable to supply Persia with any more sugar such as it did before the war, the Russian Government buys European sugar at the port of Batum and sends it to Persia through the agency of its trade organizations, acting merely as a middleman. This sugar costs them 5 krans a batman at Batum and can be transported to Persia at the rate of 2 krans a batman, where it is sold for 10 krans or even more. The profit on such a transaction is about 30 per cent. and the Russian Government will not allow anyone to interfere with such a policy which brings her such large profits. Persian merchants are not allowed to trade with Persia and the northern tariff being still what it was twenty-two years ago, it pays Russia to replace its former Persian trade by acting as a middleman for Persia.

The same policy is enforced with regard to goods bought from Persia. Persian rice and Persian cotton which are needed in Russia are often left to rot, or the owners have to sell these commodities to their sole customer who dictates his own price. The Persian producers of such articles cannot send their products to other frontiers for shipment to

Europe, because such a method would involve a large amount of expenditure on transport, and would not bring them any profits. Russia, realizing this, dictates her own price and generally gets the products at a very reduced price. In short, just as the pre-war Russian trade was favourable to Persia, the present Russo-Persian trade is assuming the reverse aspect and is daily becoming more unfavourable. Unless the trade policy of the Russian Government changes, there is very little prospect for any improvements in the Russo-Persian trade.

The nature of a country's imports and exports is always an accurate reflection of its industrial and commercial conditions; for, no matter how great its increase of foreign trade may be, the circumstances cannot be taken as proof of permanent progress if imports are mainly manufactures and exports mostly raw materials. Persian trade, notwithstanding the war years, has greatly increased during the last twenty years, and can be said to have trebled. The regrettable aspect of it is, that the country has to depend for all its needs on foreign countries, and is not at present able to export anything except raw materials.

Persia is quite capable of manufacturing articles which are now imported into the country but this has been retarded and obstructed by two important reasons, viz., the lack of cheap communication and a trade policy imposed on her. I have dealt in full in another chapter with the first point and need only add a few remarks here about the second.

By the treaty of Turkomanchai, concluded between Russia and Persia in 1828, the latter was forced to adopt a free trade system. This treaty fixed an *ad valorem* duty of 5 per cent. upon all imports and exports passing through Russian hands, and it set the model which was followed by all other foreign powers under the "most favoured nation" clause. In the latter part of the last century the pressure of financial stringency first drove the Government to contemplate a loan from foreign capitalists. It became evident that the only available security which was to be offered then was the revenue of the Persian customs. This was duly

offered and Russia was only too glad to accept the security and advance the necessary sums.

Persia has repeatedly asked Russia to modify the treaty of Turkomanchai, so as to allow an increase of her Customs duties. The question of Russian loans which were secured on the revenue of the customs afforded a good opportunity, but Russia was not prepared to agree to this revision unless it was made in her interests. In 1901, when the Persian Government applied to Russia for a loan, one of the conditions upon which it was granted was that the Persian tariff should be revised in accordance with the wishes and interests of Russia. As a result of this, a new commercial Convention was concluded in 1902.

This agreement imposed a tariff upon Persia which was solely in the interests of Russia. So far as Persia was concerned, it was merely a revenue tariff; as such, it was designed to increase just those revenues which she had mortgaged to Russia, with a view to facilitate further financial operations of the same ruinous character. It scarcely conferred a single advantage on Persian trade, and, from a commercial point of view, contained hardly any of those features of reciprocity which characterize commercial conventions between independent and equal powers. It was a very complicated system of specific duties, under which the chief imports and exports in which Russia was mainly interested were treated with relative lenience. It consecrated the Russian political ascendancy by stipulating that it shall never be modified without the consent of the Russian Government, and that Russian subjects shall be privileged to pay the duties in Russian bank notes.

The British, finding their trade adversely affected by this Russo-Persian Convention, obtained a similar Convention from the Persian Government.

These tariff treaties remained in force till 1920 when a general revision was made more or less favourable to Persia. This tariff is now in force on all the frontiers of Persia except the North, where the Russians insist on maintaining the old tariff of 1902.

I believe that Persia must direct her efforts toward

securing a free and independent tariff, by means of which she may protect the nation's nascent industries from competition by foreign imports. There are many industries which could easily be started in the country such as the cultivation of cotton and sugar ; but these cannot be promoted without a protective tariff ; any idea of free trade, which has brought to Persia in the past such an adverse balance of trade, must be abandoned and deprecated.

The lack of commercial institutions in the modern sense is also a great drawback to the development of Persian trade. In every large town there is a guild or gathering of merchants called the Union of Merchants or some other similar name, whose sole function is to take part in the political questions of the country under the guise of commercial interests and to foster the private aims of its members. Such gatherings must be discouraged entirely and should be replaced by Chambers of Commerce conducted on European lines. They must be made self-governing bodies whose chief functions should be to investigate commercial affairs, engage in arbitration, act as commercial consultative bodies for the Government, and to carry on trade propaganda.

There is a so-called Chamber of Commerce in Tehran, which is elected by the body of the merchants and is under the supervision of the Ministry of Commerce, but as its duties are limited to a few unimportant questions, it can hardly be said to be justified in assuming such a name.

## CHAPTER X

### THE FUTURE ECONOMIC DEVELOPMENT OF PERSIA

THE opening years of the twentieth century found Persia a backward and impoverished country. Agriculture was the only industry by which the majority of people lived, and other industries which once brought fame to Persia were ruined by the introduction of cheaper goods from Europe. There were no roads, nor any system of transport but the immemorial caravan. The mass of the people were illiterate, their life miserable, and the Government exactions very high. There was a despotic Government which ruled the country in the interest of the ruling class, and, as far as Persia's relations with foreign Governments were concerned, Czarist Russia was persistently endeavouring to destroy Persia as an independent State.

The population of Persia fell into three main groups, the agricultural population, the tribes, and the population of the towns.

The agricultural population was the most productive element of the country. It produced not only what was needed to feed the towns but also provided a surplus for export. On it fell the larger burden of taxation to provide the Government exchequer with money and the landowner with his luxurious life. The majority of peasants forming this class had no land and were simply at the mercy of the landlords who treated them like serfs.

The tribes were wandering communities with their flocks and moving tents, with their clan organization and loose tribal Government. They were mostly self-sufficing communities engaged in agriculture and grazing. The only industries with which they were occupied were animal

breeding and the manufacture of carpets. Their surplus products were exchanged with the townsmen when the tribes moved near the towns or through the intermediary of peddlers who visited the tribes. The head of the tribe was responsible to Government for a fixed annual revenue, which he collected through the various tribal sub-chiefs and heads of families, upon a rough scale determined partly by the number of tents and partly by the pastoral wealth of the clans.

The town population consisted of tradesmen, shopkeepers, merchants, craftsmen, the clergy, Government officials and their dependents. Excepting the clergy and the Government officials, the first of which was supposed to look after the spiritual welfare of the people and the second to preserve order and peace, the other groups forming the population of towns served as an intermediary between the agricultural and tribal population and the townsmen, or the townsmen and foreign countries.

Broadly speaking, Persia was at the beginning of the present century an agricultural country of the most backward type, with no modern industry, no roads or railways, no developed mines, and an adverse balance of trade. Her imports consisted for the most part of sugar, tea, kerosine, cotton goods, hardwares, glasswares, which show the limited demands ; and her exports of opium, raw cotton, silk cocoons, raw wool, tobacco, carpets, and skins which show that the country was exporting raw material. The excess of imports over exports was about 30 per cent. of the total trade.

It would not be difficult to trace back the economic reasons for such an adverse balance of trade and the resultant poverty of the country. When Europe of the 18th century was in the throes of industrial development, Persia produced not only its foodstuffs but also the manufactured articles required for home consumption. Modern machine production on a large scale, which transformed the countries of western Europe into industrial countries, required distant markets for its products as well as new sources from which it could obtain raw material and food-stuffs.

All through the 19th century, European goods began to flow into Asiatic markets and upset the industrial lives of these countries. Goods produced by machinery were sold much cheaper than goods manufactured by hand. Consequently a great majority of the Asiatic manufacturers and artisans, finding their business ruined and themselves unable to compete with European-made goods, were left without any work with which to make a living. There were no new machine industries in their own countries, and they could not return to an agricultural stage either, because the food supply of the country was greater than was needed and owing to lack of modern transport extra production could not be exported advantageously to the industrial markets where they were needed. The only alternative was to start producing raw material for the European manufacturer.

In the case of India, China and other countries of Asia where the geographical conditions, natural harbours, navigable rivers and other facilities of transport were available, better conditions prevailed. The production of raw material and even food-stuffs was encouraged and the supplies of these articles were comparatively more accessible for the European markets. But in the case of Persia, lacking every kind of transport facilities and depending on the immemorial caravans of mules and donkeys, the problem of producing cheap food-stuffs at a price which could compete with American or Russian grain was out of question, while the production of raw material, such as was done in other countries of Asia, was difficult and often discouraging.

The result of all this was that the old industries were ruined, agriculture diminished, the population decreased, and people began to live on their past savings and their actual capital. The whole change was brought about gradually, not abruptly, as is usual in present-day industrial countries, and consequently the sufferings and hardships resulting from this were not quite so noticeable.

I am inclined to believe that this gradual extinction of the middle class in Persia during the nineteenth century had no equal in other countries of Asia. Other countries like

China and India were provided, to a certain extent, with natural transport facilities, a bigger population, accessible harbours, longer coast lines and greater rainfall, while Persia lacking all this sunk down to the most miserable conditions of life.

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In common with other countries of Asia, Persia during the 19th century was ruled by a despotic and repressive Government, the effects of whose rule were reflected in the economic conditions of the country. The Persian monarchs of the 19th century were mostly interested in providing for themselves a luxurious life of the true oriental type, without any regard for the welfare of their subjects.

In the latter part of the century Government employees began to increase to such an extent as to oblige the state to exact money by force from the people. This, however, was not sufficient to cover the ever-increasing cost of the court and the idea of loans from foreign Governments suggested itself. The foreign Governments lent the money and in return received the rights of the people and the natural resources of the country. Finally this aroused great opposition on the part of the people and ended in the political changes of 1906.

From 1906 until the collapse of the Romanoff dynasty in Russia, foreign political pressure played a very active rôle in further undermining the economic conditions of Persia. These political events had, and still have, a marked effect on the economic development of the country, and in order to explain their economic consequences I deem it necessary to summarize them here.

Russia's encroachments on Persia began in the early part of the 19th century, and from that day Czarist Russia persistently endeavoured to destroy Persia as an independent state. There are many valuable books, written by competent writers, which explain in detail the incessant quarrels which Romanoff Russia fixed upon her weak neighbour to the South, the sequel of which always brought her an advantage ; and which explain what Persia has undergone at the hands of the great Slav Empire.

Russia had always aimed to bring about the dissolution of Persia and for that purpose, especially during the present century, she resorted to every form of intrigue likely to produce disintegration and chaos. Every sign of vitality among the people, every effort to introduce reforms or improvements in the administration, was made a reason for aggression. Every time that Persia tried to put her house in order, to reform her finances, to introduce foreign capital into the country, to interest other countries in her affairs and to reorganize her economic life, Russia opposed, intrigued, brought pressure to bear and even occupied Persian territory to check such attempts.

During the whole of the 19th century, Russia, whilst extending in every possible way her power and influence in Persia, was obliged to maintain an appearance of restraint by the likelihood of a collision with England. The latter greatly helped Persia to keep Russian ambitions within bounds; and it was due to British efforts and support that Russia was kept away from the rich plains of India and the warm waters of the Persian Gulf.

In 1907 came the Anglo-Russian Agreement which divided Persia into spheres of influence and greatly disturbed the public opinion of the country. The pressure of circumstances in Europe was responsible for this compromise on the part of British diplomacy, and matters took a sharp turn which helped to further the designs of Persia's northern neighbour. The constitutional movement just blooming in Persia was from the beginning looked upon with strong disfavour, and any attempt on the part of the new régime to improve the economic conditions of the country was counteracted and opposed by Russia. In short the history of Persia during the years 1907-1917 was a real tragedy.

During the World War, Persian neutrality was violated and both sides freely made use of her strategical position to plan or to carry out far-reaching schemes of combat. Consequently Persian territory was invaded and numerous losses were inflicted on a country which was on paper an independent and neutral state. During this period the lack of a financial system and the domination of foreign interests in

the conduct of affairs and in the development of resources caused the further depression of the country economically.

The news of the Russian Revolution came to Persia as unexpected and fortunate. The Bolshevik Government came into existence, and declared the abrogation of all Russian claims in Persia that infringed the rights of Persian sovereignty. The withdrawal of the British troops, the unpopularity of the Anglo-Persian Agreement of 1919, the Bolshevik occupation of the port of Enzeli, and the fear of a second Russian invasion caused the Persian Government to negotiate a treaty with Soviet Russia, which was subsequently signed in 1921.

This treaty is a remarkable document, half of which is Soviet propaganda and the other half a notable renunciation of Russia's former claims on Persia. Its phrases were carefully planned and arranged for the effect it might have on the East as a whole. A close study of its clauses, together with the later policy of Soviet Russia in trying, by every means, to neutralize it in practise, tends to modify the impression which it at first created. As time has passed, a path seems to have been left open to the traditions of aggressive Russian national policy in Persia.

As a result of recent political events in this part of the world, due mainly to the conditions prevailing in Russia, which has comparatively checked the pre-war Russian designs, Persia has enjoyed a stable Government during the past four years.

Not in many years has Persia enjoyed so large a measure of political independence and national security as she does to-day. A national army has established order in the remotest parts of the country, a strong Government has been engaged for the past years in subduing the tribal chiefs, and an American Financial Mission has done a good deal to reorganize the finances of the country.

The Government of the Romanoffs, aggressive, predatory, and menacing Persian liberty for centuries, has vanished; and though it is replaced by another system just as unscrupulous, this is not likely to make its influence felt in Persia to the same extent as its predecessor. Great

Britain, fully realizing the advantages of seeing a strong and independent state in Persia, has reverted to its old time policy of assisting Persia in her national desires.

Persia is now entering upon a period of political development and economic expansion which, in view of her remarkable geographic situation and her enormous natural resources, promises to make her, in the near future, one of the most progressive and prosperous nations of the Orient.

The political obstacles in the way of her economic development have either disappeared or will disappear in the course of time, provided she takes advantage of the present political opportunities afforded to her, and makes full use of them to establish a sound and progressive economic system. If this opportunity is lost, and if the basis of a sound economic life on which stands a sound and strong political system is not laid, there is always the danger of past conditions returning to Persia with all their ugly appearances.

The above short sketch of political conditions will help to explain the reasons for the setbacks of the past and it now remains to be seen what should be done in the future.

In the previous chapters I have sketched the natural resources of Persia, the present economic conditions of the country, and the future possibilities which, if carefully planned, might bring prosperity to the country.

The political obstacles of the past which hindered the rapid development of the country have disappeared. There is a national Government, a considerable measure of security, and a comparatively sound public finance. The initial steps have been taken, and the great task of making use of the resources of the country, increasing its population, and providing it with modern means of living, is now to be started.

The World War has left Europe in a disturbed economic condition. Its consequent complications of every kind, political, economic, and psychological, have brought about a state of affairs which requires a good deal of time before it can be adjusted. Unemployment, the constriction of markets,

and a long continuation of most perplexing rebuffs to far-reaching commercial enterprise, are the prominent facts of the present commercial position of Europe. The big spaces and large populations which seemed, ten or fifteen years ago, to present fields of very hopeful development are rendered largely inaccessible to the varied forms of European enterprise, because the war and its prolonged effects have changed the people's outlook all over the world. While Europe is struggling hard to adapt, concentrate, and co-operate at home, the fundamental necessity remains that it must seek fresh spaces and fresh markets all over the world to remedy the present conditions.

The old methods, the pre-war conditions, the silent and patient populations of Asia and Africa have changed. Europe must adapt itself to present needs and demands of other parts of the world, on which depend its prosperity and existence; and the rest of the world must also co-operate and work hard to remedy the present conditions.

Persia offers a very suitable opportunity for European and American enterprise. Though not large in population she affords an excellent field for sound investment and high returns. Her climate, her geographical position, her boundless resources, all present a prospect which could hardly be equalled by any other country enjoying the same privileges.

A co-operation of interests between European and American capital and technical knowledge on the one hand, and Persian willingness to develop the hidden wealth of the country on the other is essential and must come sooner or later. What is needed at present is a better understanding between the peoples of East and West and a strong will to face the facts.

At the present moment the questions which are exercising the Persian mind most are financial and economic relationships with foreign countries. The last few years have been spent in displaying a favour towards this or that country. Hard facts have been put aside, and the leaders of Persian thought have engaged themselves in a futile attempt to look for help to a few countries which are claimed to be disinterested in the internal affairs of Persia.

Experience has, to a certain extent, shown them the futility of this mode of thinking. In a matter of this nature there is no room for sentimentality ; it is essentially a business proposition. To claim that the national policy of Persia must be directed towards excluding the capital of one country and favouring the other is utterly absurd. If such a motive emanates from political considerations and the fear of future political entanglements, one may be sure that the newcomers will soon follow the course of old ones as long as Persians are not strong enough to defend their interests. The investment of capital by the nationals of a foreign Government in an undeveloped country necessarily involves the creation of some interest for that Government, and the investor is bound to call on his Government to protect his interests when occasion arises. Experience also shows that to try to exclude the capital of one country is mere folly, because capital is more or less international and, provided there are chances for high returns, it can always enter the country under a different garb.

The last few years have witnessed a rather hectic indulgence in different " phobias." A good deal of precious time and energy has been lost in discouraging the capital of this country and favouring that of another. The resentments aroused by the War and its aftermath effects have been chiefly responsible for such expressions, and there is no doubt that hard experience and the urgent necessity for remedying present conditions will, in the course of time, convince the Persians of the desirability of putting aside sentiments which have nothing to do with sound business propositions.

There is also a minority in Persia which believes that modern industry can be introduced in Persia without outside help. This school of thought is mostly composed of old fanatics who are even ignorant of the great failure experienced in Russia, a country so close to them. Their number is so small that their pretensions may be ignored.

Assuming then that experience will shortly cause the disappearance of absurd sentiments, and that the desire for attracting foreign capital grows more intense with the rapidly increasing demand, it would not be out of place to discuss

briefly the primary requirements of the country and the best method of interesting foreign investors to assist in the realization of this end.

The brief description given in the first part of this chapter shows that Persia, from an economic point of view, is a mediæval country which is on the brink of the modern stage. The general aspect of the country is more or less analogous to that of England of the sixteenth and seventeenth centuries when she too was becoming "modern."

England in the sixteenth century was what Persia is to-day, an exporter of surplus agricultural products. The coal and iron of England in 1500 was as undeveloped as that of present Persia, although both possessed great natural resources. England was beginning in the sixteenth century to enjoy order after the Wars of the Roses, just as Persia does to-day after many years of hardship. The analogy cannot, however, be carried too far as it is impossible to overlook the penetrating influences of Western ideas which are coming to the East, and are accelerating this modernization—an influence which did not exist at that time in England. It took England two or three centuries to pass from the mediæval to the modern stage. Germany passed through this transition in a shorter period, Japan still shorter, and countries like Persia are going through these different stages in decades, where it took England or France centuries to do so.

One of the marvels of present-day civilization is its mobility of migration, and no contemporary people can escape the economic and mental meshes which Western Civilization has cast about the world. Its existence is dependent on its propagation and, whether the undeveloped countries want it or not, it is spreading to all parts of the globe. The only wise course is to learn how to move among these meshes with ease, and how to adapt them to the needs of the country.

The first and the foremost needs of Persia are capital and technical knowledge. There is very little capital available in the country, indeed practically none. The accumulation of capital was impeded in the past, owing to lack of security.

The habit of thrift was lost, the idea of investment when there was no security was not developed ; and money gained was either spent extravagantly or was hoarded.

Some Persians favour the policy of developing the country without outside help. Such a policy, if feasible to adopt, must necessarily be aristocratic in undeveloped countries, and will entail great poverty for the bulk of the population. In England industrialism was built up without foreign capital, but the circumstances were very special, and not such as can be repeated. Coal and iron were plentiful ; new inventions, all English and confined to England by the Napoleonic wars, were cheapening production enormously ; and above all, there was no other industrial nation to compete. In spite of all these advantages the terrible hardships were appalling. Therefore, it cannot be hoped that a modern undeveloped country, without special advantages, can be developed or become industrial, without the help of foreign capital.

Assuming that foreign capital is essential for the future development of Persia, we then come to the preliminary methods of its employment. The most important factor is the creation of a railway system, the improvement of roads, and the founding of a general and fast system of transport.

A special tax on all tea and sugar imported into the country has recently been established to provide funds for the construction of railways. This tax is estimated to yield yearly from £700,000 to £800,000, and is to be appropriated to no other purpose except railway construction. The Bill enacted by the Persian Parliament levying this tax explicitly provides that the revenue thus derived should not be placed at the service of a loan, which is essential for railway construction. I am sure that such a provision is a temporary measure intended to safeguard the expenditure of this sum and will be amended in due time ; because it would be ridiculous to attempt to build and maintain a modern railway line of any length with such a small sum.

This Bill is a right step in the right direction, and shows that Persia has realized the need of making immediate provision for such a badly needed enterprise. The task, however,

is a very great one ; and when it is realized that every rail and every locomotive, and at first even the sleepers are to be imported, together with European artisans to work the line, then it is clear that railways not merely begin the transformation of Persian trade but affect the foundations of Persian society.

The subject of railway construction has been dealt with in another chapter ; and here, I would like to add that the difficulties of finance in railway construction might prove a very heavy burden on the state during the early years ; but as the railways enrich the country, the taxable capacity of the population increases accordingly, and there is no argument strong enough to disprove the apparent advantages of such an enterprise.

There are some people who favour an extensive system of motor transport for the present, as less costly and more adaptable to present needs. A brief reference to the motor transport system developing so rapidly in Europe, and even competing with railways, shows that heavy transport is, and will remain probably, in the hands of railways. Persia needs both, but she needs the heavy transport more, in order to increase her bulk production.

There is another project in hand, which is expected shortly to receive the sanction of parliament, and which provides for a regular system of taxation, the income of which is to be devoted to road construction. The Persian Government is bent on building and maintaining good roads, which, in the absence of railways, are essential for the development of vehicle and especially motor transport.

Of public services which make for security of life, increase the yield and value of the land and the revenue derived from it, next to Transportation comes Irrigation. There is plenty of water which goes to waste in Persia. The question of conservation of water is an important one for the country, where rainfall is low and all agriculture depends on irrigation.

Railways and Irrigation Works will create new opportunities for the people of Persia, assist the whole economic development of the country, and influence the commercial, social

and political life of the people far more profoundly than any other thing. The development of these two is the cornerstone on which the future economic development of the country rests, and they are the ones which require urgent and immediate attention. Their realization is practicable, their development possible, and the immediate salvation of Persia depends on their accomplishment.

Next to these comes the industrial development of the country. The natural resources of Persia, hidden under the ground, and generally admitted to be of enormous value, need exploitation. The forerunners of industry are cheap transport, large fuel supplies, technical knowledge and raw material.

In the case of Persia transport comes first. She possesses large amounts of coal, iron, oil, and other minerals ; she can develop her agriculture and provide raw material for her industry, because her climate suits nearly every kind of crop ; she can send her youth to Europe and America for acquiring technical knowledge ; but without modern transport, as the Persian saying goes, " All is like a design on water."

It will take a great many years before Persia can become an industrial country in the modern sense of the word ; but I believe that such simple and practical industries as are adaptable to the present needs of Persia may be encouraged even at once. For example, a sugar beet industry or a cotton industry, started on a small scale to provide for the needs of the country, will prove very beneficial. It will reduce the imports, will encourage agriculture, and is quite adaptable to the needs of the country.

Persia is quite different from countries which possess scanty mineral resources and concentrate their efforts entirely on agriculture. She is more or less comparable to the United States of America, capable of developing both agriculture and industry. She is bound to be an agricultural country to begin with, but her potentialities afford opportunity for the development of industry as well. By developing her agriculture on a large scale with the help of modern transport and irrigation, she can accumulate a surplus

in a very short period of time, and then can embark on a system of industrial development to exploit her mineral resources.

For agricultural development she needs irrigation and public works, and for starting her industry she must, before everything else, try to free herself of tariff treaties which at present serve as the most effective means of killing any industry which may be started in Persia. She must be free to frame her tariff in accordance with her national needs. Infant industries are accorded protection even in the highly developed industrial countries, and it is quite clear that in the case of countries like Persia modern industry can never be developed without adequate protection.

Advocating protection might seem to some people too narrow-minded ; but without that, it would be impossible to begin any industry in undeveloped countries. The early industrialists of Europe believed that industry would be practised in the regions most convenient from the proximity of power or raw material ; and the soil would be utilized, in each part of the world, only for the crops which that part could produce best. But with industrialism has grown nationalism, which has tended more and more to make each nation an independent economic entity by itself.

The railways and great public works, which were explained above to stand at the head of the list representing Persian requirements, cannot be created without foreign capital in the shape of loans or investments. Under present circumstances, it would seem both inadvisable as well as impracticable to persuade foreign capital to undertake the creation of such works on its own initiative. Such undertakings are not earning concerns for many years to come, and the chances of interesting foreign capitalists in such schemes without some sort of guarantee seems very remote. Therefore the only alternative is to float loans, or to guarantee the interest on the capital invested. Both these necessitate the payment of interest, which in turn means higher taxation.

By a careful and systematic revision of the present taxation, I am convinced, notwithstanding the general poverty of the country and the slackness of trade, that additional revenue amounting to nearly £3,000,000 can be raised within a short period. In addition to this certain adjustments can also be made in the customs tariff to bring in another million, and with the sugar and tea tax already in force, there is every hope of getting a surplus of £5,000,000.

This is the limit of what can be provided at present, and may be even considered by many as a too liberal estimate. I admit that it might appear so, but one must not forget that there are many classes in Persia which are not taxed at all, and there are many evasions in the case of those who pay any taxes.

The raising of this additional taxation entails a very heavy sacrifice on the part of the Persians, and might prove a rather difficult task ; but I am convinced that the first sacrifice must be made to show our goodwill, to strengthen our national credit, and to convince the foreign investor that Persia offers a sound field for investment. To rely entirely on the foreign investor is not possible, and the first move has to be made by Persians themselves.

This £5,000,000 can be appropriated to the service of a loan of about 60 to 70 million pounds, which is sufficient to start a railway system as well as the necessary irrigation works for the development of agriculture and trade.

The immediate result, following the introduction of railways, will be a general tendency towards higher production, and the consequent increase of exports. In addition the railways will provide new employment for the people, both in making and working them, and their effect on raising the standard of living will reflect on the taxable capacity of the population.

Furthermore, every reasonable opportunity must be given to foreign capital, without any discrimination whatsoever, to come to Persia and co-operate in the realization of this end and the development of Persia. The limited rights allowed to foreigners in acquiring property must be extended, the immigration of foreign skilled labour must be encouraged,

judicial security should be provided for all regardless of nationality, and in short nothing should be left undone in granting liberal concessions to foreign capital, compatible with the interests of Persia, for exploiting the natural resources of the country.

The future salvation of Persia lies in adopting a liberal policy towards foreign capital, and co-operation with it for the economic development of the country.

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